No. 18.

No 18.

Field Book of Willis L. Jepson

-1907-

N.B. – If lost finder please return by mail to Department of Botany, University of California and receive reward.

Berkeley,
California, U.S.A.

Sherwood, July 31, 1907.

Tan Oak Measurements.

– Tree No. 18. Height = 48 ft. very limby top.
Bark weight = 124 lbs.
Diam. butt. = 9 in. at 2 ft.
Age = 48 years. Peeled 16 feet.

– Tree No. 19. Height = 70½ feet.

Weights Bark	
	Age = 70 years
119	Diam. butt = 1ft 1¼ in. at 2½ ft. above g.
113	Bark thickness = 1½ in.
101	Bark peeled 36½ feet.
96	Crooked rather short tree
429 Total	

– Tan Oak is very perrickity about peeling. The men never start on a big tree near the end of the afternoon nor even just before noon hour. A tree had its first rim taken and by reason of interruption the peelers could not finish. The next morning the second rim behaved badly about coming off.

Sherwood Valley

– A peeler says: Wild Nutmeg wood very tough. When swamping I've cut a sapling half in two, split it up and wrapped the torn part around a tree. It's that tough. The fresh wood smells like cologne, very agreeable. Peppermood is also a good tough wood.

Tan Oak

– White-barked trees are thin barked says a peeler. They most frequently are.

– Peeling lasts longer on north hillside where it is cool. The men are, therefore put on the ridges and south slopes first.

July 31, 1907.

Tan Oak measurements.

– Tree No. 20. Height = 66 feet.

96	Diam butt = 1.6 at 3 ft.
81	Peeled 42 feet.
109	Bark on butt = 1½ in thick
145	" end run = ¾ in. "
122	Trunk diam. end run = 1 ft!
122	
99	
774	= Weight bark.

Snaggy-top tree

Tan Oak.

– In throwing a tree the hollow makes a great deal of difference, as it is not so easy to direct the fall. This may be partly overcome by using hammer & wedge but even so a tree may go off the cut, or split up the trunk.

Sherwood Valley

Tan oak measurements

-Tree No. 21. Height = 80 feet.
Bark wright = 865 lbs.
Diam. stump = 1 ft. 5½ in. at 3 ft.
Trunk peeled = 60 feet.
Bark 1st rim = 2 in. thick.
Most of it = 7/8" "
Last rim = ½" "
Diam trunk last rim = 9 in.

-Quercus densiflora, trunk of sapling, diam. 1¼ inches, injured by fire when very young, a hollow center of ½ inch but afterwards completely closed over! No sign outside! See box material.

-Pseudotsuga taxifolia. Aug. '07 overshaded slow-growing sapling in the Redwood forest, section taken at base, see box material, nearly 50 years old!
Diameter 1½ inches.

August 1, 1907.

Tan Oak

-Tree No. 22. Height = 100 feet.
Age = 185 years.
Bark peeled = 81 feet.
Diam. trunk last rim = 1 ft. 6 in.
Diam. butt = 3 ft. 10 in. at 2 ft.
Bark 1 3/4 in thick at butt.
" 1½ in. at 44 ft.
Bark upper cut = 1 in.

Wright	bark
132	100
160	133
137	110
160	94
117	99
81	
150	118
119	105
95	75
110	114
142	128
129	101
100	71
108	143
60	106
37	70
105	1567
154	
118	
2214	

Waste under side of log = 30 lbs. Scattered = 20 lbs

Two men ½ day and one man 1½ hrs to peel. They spent a lot of time preparing a place for it to fall, & moving bark. Then they covered up a lot of bark because it did not go down just where they planned.

Total wright = 3781 lbs.

Sherwood Valley

Tree No. 23. Tan Oak.

wrights	bark.
95	90
93	100
141	103
135	293
103	
83	
120	
105	
84	
110	
107	
87	
88	
83	
96	
98	
1628	

Height = 118 feet.

Diam. butt = 2 ft. 8 in. at 3 ft. above ground.

Bark on butt = 1½ in. thick
" " end run = ½ in. "
" most of it = 1 in. "

Reeled 86 feet.

Diam at end run = 10½ in.

Age = 95 rings counted plus 30 estimated (3 in. radius in hollow centre) = 125 rings

Total wright = 1921 lbs

Aug. 1. 1907.

Tan Oak.

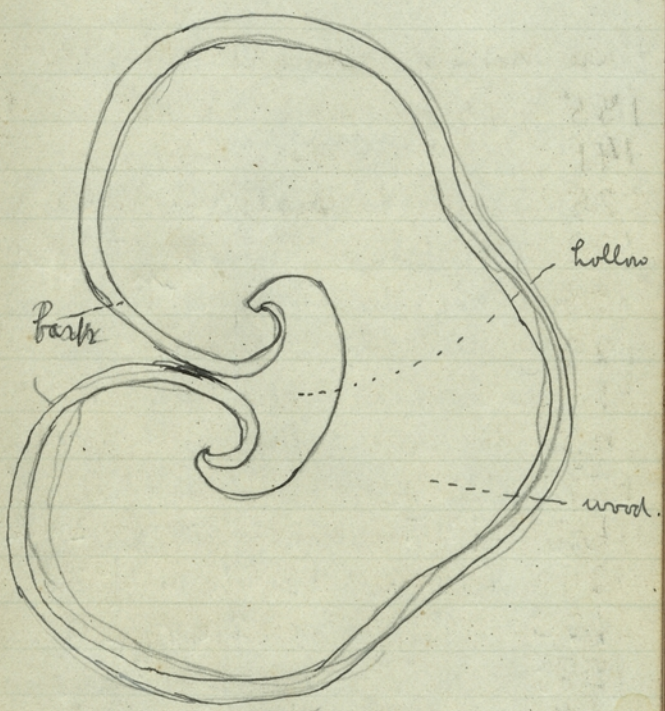
Tree No. 24 Height = 91 feet.

85	First 5 runs = 1 in. bark.
39	Diam. butt. = 1 ft. 8½ in at 3½ ft.
120	Age = 169 (Slow grown)
104	Peeled 67 feet.
100	Diam. end run = 11 in.
136	Slow grower, fine rings, sound heart.
84	
98	Two men 1 hr to peel.
77	
123	
966	= Total wright bark.

Sherwood Valley

Tree	No. 2 S.	
135	155	Height = 124 ft.
141	99	Diam. butt. 2 ft 10 in. at 3 ft. 3 in.
125	110	Peeled 94 feet
123	364	Diam. at upper cut = 10 in.
93		
127		
119		Age = 148 years
145		
127		Bark average = 3/4 to 1
165		in. thick, at butt,
120		less than 1 1/2 in.
160		Thin bark tree.
158		
58		Lost bark = 60 lbs.
150		
123		Lost bark 60 lbs
2069		Total weight = 2433 lbs.

Aug. 2. 1907.



3 ft tree

Example of fire burned trunk which has closed in from the sides. The Tan Oak shows great power to do this.

Sherwood Valley

Tree No 26

Tree No. 26 Tan Oak.

129
99
63 291 lbs first rim.

Unfinished!

This tree a goosepen tree. It fell off the cut and in such a way that it struck a Douglas Fir, snapped in two and the lower part went flat on the ground. Lost of the bark under side so great I stopped weighing.

Tree No. 27. Height = 79 feet
Diam. butt = 1 ft 4½ in. at 3 ft.

134 Peeled 37½ feet
90 Diam. end rim = 10 in.
136 Age = 83 years (quite
115 Age = 83 distinct rings.)
56 Height = 79 feet.
531 Two men 25 mins to peel.
Bark at butt = 1 in.
" average ½ to ¾ in.

August 3, 1907.

Wilcox's Exposures. - All Tan Oak.

No. 1. Butt end of log with hollow centre, 3 ft. log, 1 ft. hollow

No. 2. Poles 40 ft. high., 142 short rims taken. One pole to right struck bark. Poles 4 to 8 diam at 1 ft. 35 to 40 ft.

No. 3. Two-ft tree at 4 ft., detail of bark with 9 trymarks about tree

No. 4. Bledding bark. Nearly 1 cord on sled.

No 5. Taking first rim. Tree 3 ft 1 in. at 2 feet. 110 feet high to rim about.

No 6. Undercut and back cut.

No 7. Peeling log.

No 8. Unloading bark from sled.

No 9. Tangle down logs. Main cross log 80 feet peeled, 2 ft. 4 in. at butt, 1½ ft. at 40 ft., 1 ft. at 80 ft. Three other logs of similar size.

Sherwood Valley

; 6 other logs 1½ ft. butt, 60 feet peeled in the average.

No. 10. Fire scar-tree, 1 ft. 10 in. diam at 4 ft. Scar runs up 10 feet.

No. 11. Conic woody buds at base of 3 ft. tree about 6000 buds on base this tree.

No. 12. Cross-section Tan Oak trunk, 14 in. diameter. Cut 21 days. To show season checks.

No. 13. General view of Tan Oak country.

August 5, 1907.

Tree No. 28

Weight	Bark
155	98
117	117
156	122
82	113
139	170
153	151
133	135
123	110
103	113
123	1129
112	
160	
120	
128	
112	
106	
2022	

Height = 116 feet.
Age = 166 years
Diam. butt = 3 ft. 1½ in. almost sound. at 2½ feet.
Bark = 2 in. thick on butt.
Bark 1 in. thick except 5 lowest rings where 1½ to 2 in. thick.
Peeled = 84 feet.

Weight 1st rim = 438 lbs
& chips
Next 4 rims = 904 "
First five rims = 1342 "

Diam. end rim = 1 ft. 1 in.

Peeled in 2 hrs 50 min.

Might bark = 3151 lbs

Sherwood Valley

- Two snow-falls last winter, each 18 inches. Broke down Tan Oak trees, being broad leaved evergreen, but mostly broke off limbs. Such trees will not peel or not readily. Goose-pen trees, long ago injured by fire, often do not peel readily.
- Where the hills are very steep and it is next to impossible to draw up a sled, Tan Oak trees, 5 to 7 in diam. are cut and the bark piled on top of them. The load is then drawn down hill by two horses. It's a sight to see such a load come down the hill.

- Cornus Nuttallii, leaves in terminal rosettes of 4's (being opposite). 2t stump-sprouts.

August 6, 1907.

- Noticed a Berberis pinnata plant in woods today; stem 15 inches high, unbranched, with a tuft of leaves on top. This species is not uncommon in the Douglas Fir-Redwood woods. [This seems more likely to have been B. aquifolium] - W.L.J. Jan. 1920.
- Taxus brevifolia, 5ft. 10 in. circ. at 1ft. a.g., trunk clear for 4 ft. above ground. Main trunk through tree. 38ft. h., broad-crowned.

- Tan Oak, one photographed for Sackett 2½ ft. diam. and 143 feet high.
- The Northwestern Redwood Co. pays $2.50 per cord for putting the bark in the car, from the tree in the woods. This means, bunching, skidding, hauling. ($1.75 for the first three operations, $.75 for hauling) swamping,

Sherwood Valley

- A Tan oak standing in the bottom of a gulch among Douglas firs has just been cut: 127 ft high, 2 ft. 3 in. at 2 ft. above the ground.

- The peelers differ tremendously in their capacity. A man is supposed to peel on an average 1½ cords per day. Exceptional men will peel 2 cords steadily and 4 or 5 cords under favorable conditions. Some men do not take full advantage of the country in laying their trees. Unless there are reasons to the contrary the tree should be peeled up hill or down hill. On a side hill the man on the

August 7, 1907.

upper side is bending over too far and the man on the lower side is reaching too high.

Peeling should be up hill. In case the tree is felled down hill the peelers brush down and peel back. By this means they are always striking downward with their axes, and as they peel the bark moves down hill out of their way and doesn't bother their feet.

- Peeling should never be by contract as the contractor will peel only the bark which is easiest to peel.

Sherwood Valley

– Redwoods – they stop here at Sherwood, allhō thē line is diagonal, not north and south. The trees on thē edges of thē bare flats at thē bases of thē hills show off to fine advantage. A little group southwest of thē "Sherwood Home" are remarkably cedar-like in their appearance as seen at distance. The foliage is clustered in ball-like or roundish clusters at thē ends of thē branches which clothe thē tree all the way down. These trees, while 300 or 400 years old, are stumps sprouts and form a circle. There are a half-dozen of these trees – not all in one circle.

August 7, 1907.

These trees are remarkably unlike thē ordinary redwoods and deserve a special name as a form. The ordinary redwood is more or less foliaged all thē way out but thē foliage is scattered and thin as compared with this Sherwood form.

The flat-topped Redwoods help materially to relieve the forests of monotony. Some of them in their horizontal branches in top of tree are very similar to thē Sugar Pine.

The fog came in last night. It passed to thē interior, marched backwards to thē sea, sent its battalions forward again, yet with all this vacillation it rested when at rest right on

Sherwood Valley

the Redwood line at Sherwood. I was very much interested in watching this bank move inward and outward, and then linger where the Redwoods stopped!

Sunday we had a special dinner, the old-fashioned country sort. Mrs. Sherwood loads her table down with the products of her garden, berry-patch, chicken-yard and dairy. At the head of the table was a roast pig, resplendent in his glistening vesture and straight from the oven. Twenty-seven people feasted upon him. I cannot say how many nationalities and half-breeds were represented. Mrs.

August 7, 1907.

relict of the late Sherwood,
Sherwood is one of these hard-working "good old souls" who takes a cheerful view of life while earning her living and has a happy word for each dependant and guest. Sherwood was a Harvard graduate who harked to the "call of the wild" and went back to nature in a very liberal way. In early days he settled here, gave his name to the spot, and gathered a harem of Indian women. Later on, he took a white woman to wife. His Indian progeny is numerous and the woods are full of half-breed Sherwoods. The son's name is not necessarily, however, an indication of parentage, since all the Indians, half-breed and full-breed alike,

Sherwood Valley

have English sir-names which they took from the name of the man they worked for, just as the negroes took the names of their masters. Sherwood in his life-time acquired wide celebrity by reason of his shrewdness, conversational powers and patriarchal appearance. From the Sherwood porch one looks out over a most charming prospect of valley, wooded hills with open swales between, and in the distance the heavy outline of Mt. Sanhedrin. Nearly all that one can see, except the distant mountains, Sherwood owned — a principality,

But he dissipated, died heavily in debt and but 15 or 20 acres are left the widow.

Altitudes (in Mendocino Co.).

Ukiah	635 feet
Willits	1350 "
Covelo	1250 "
Potter	975 "
Boonville	525 "
Ridgewood	1927 "
Sherwood	2200 "
Sanhedrin	6300 "

went down to Willits Aug. 7.

Willits to Fort Bragg

The stage ride from Sherwood Home to Alpine is through a continuous forest of Redwood, with Douglas Fir, Madrone & Tan Oak. I had a seat outside on a 4-horse heavily loaded Concord coach. The last two miles is so steep that shoes with chains locked to the front of the wagon were put on the hind wheels. Even then, the stage slipped easily down the hill.

At Ft. Bragg I was welcomed by Mr. Johnson of the Union Lumber Company. The company is now cutting trees which previously were left to burn in the yarding process: Tan Oak, Madrone, Nutmeg. The Madrone

August 9, 1907.

shows splendid patterns. The Nutmeg is rare, but is a fine wood and is remarkable for its delicately fragrant odor. I can understand why some people say it smells like cologne, and the woodsmen call it "Stinking Yew" though it doesn't stink. The Tan Oak boards look first rate. But the 4 inch sticks are checked and warped. They were cut from old logs. The only way is to soak them either before or after sawing. Dry with weights on. The company are putting a lot of stuff in open sheds that previously they neglected.

I met Mr. Brush of Cloverdale, an elderly business man

Fort Bragg

with pleasant cordial way and long whiskers; Mrs. Kincaid formerly of San Francisco; Miss Hunt, neice of U.S. Circuit-Judge Hunt; Miss Van Arsdale, daughter of the lumberman who has the fine country place in Walker Valley; etc.

Mr. Brush remarked that the pepperwood was a fine tree and said: "Do you remember Mr. Johnson when we used oxen in logging we made ox-yoke always out of pepperwood?" - F. Platt, whom I met here comments on the toughness of yew; breaks but the strands can be knotted. He expressed his

August 10, 1907.

admiration for that fine main Redwood forest and said he regarded it as one of the wonders of the modern world, like the Grand Cañon of Arizona and Yosemite. Only these latter can not be destroyed and it makes one sad to think this forest will be and can never be replaced. - Mrs. Kincaid, former prin. girls High S., San Fr. went on a botanizing trip with the Brandegees when they were first married, from Ukiah to Westport and down the coast to Mendocino City and back to Ukiah. They had a wagon to carry the specimens but the party walked. Mrs. K. says they were very demonstrative continually stopping to kiss each other. She would cry to them: My face is set sternly to the front

Fort Bragg

Pine Barrens, Mendocino County.

– Pinus contorta, small trees 4 ft. high to 25 ft. high. The taller ones rough barked just as in typical beach pine.

– Pinus Muricata, typical but small trees.

– Cupressus Goveniana. Many trees 2 to 4 feet high fruiting. One tree fruiting at 7 ft. where soil samples taken. Two soil samples taken. One at three inches below the surface and containing more or less surface organic matter. The next at 4 to 7 inches below the surface and quite virgin. Below that

August 19, 1907

the soft sandstone came in and it was impossible to get through it with a spade. I notice this sandstone subbstratum cropping near the surface in many places. It may accompartially for the dwarfing. Also for the overthrowing by the wind of the larger Pinus contorta trees. Many Gowen Cypress shrubs, or rather most, were 6 to 15 feet high. I saw poles unbranched 22 feet high. I also saw two trees in a swale not obviously different: they were 75 feet high, one 8 ft 6 in. circumference at 4 ft, the other 8 ft. 2 in. circumference at 4 ft. The

Fort Bragg ("Pine Barrens")

bark is brown, smoothish but superficially checked into ribbons 3/4 inch broad marked interlocking. These were truly remarkable trees. The trunks were clear for 30 or 40 feet and I could get no branches but I have no reason for believing them different from the associated poles or shrubs. They bore cones freely.

- Ledum glandulosum, 2 to 4 ft. h.
- Rhododendron californicum, Hook., abundant.
- Vaccinium ovatum, abundant. Children were gathering the ripe berries. They said they sold them at 25 cents a gallon. They call them "huckleberries."
- Castanopsis chrysophylla. Shrubs

Sherwood, Aug 12, 1907

- A man on the stage, he hails from Westport where he is a "merchant" (=storekeeper), says: "White Fir smells like anything when cut up into boards. It is now sawn for inside work. Formerly they never touched it. Did not even see it! They considered it utterly no good because it rots so quickly outside. A board left out all winter will fall to pieces when you pick it up. Still if kept inside, that is to say dry, it is all right and it is all right too if kept under water. Used for dams.

Fort Bragg to

– Tan Oak peeling comes at the very busiest time of year. Being the busiest season it is most difficult to take care of the wood. A large concern like the Union Lumber Co. is hustling on big orders of Redwood & Ore. Pine. The sawing is all on special orders for California, Australia, Manila. The mill machinery and beams are all set for this special work on Redwood & Oregon Pine, and it would be both inconvenient and difficult to take care of Tan Oak and other small lots at this time

Sherwood, Aug 12, 1907.

– Redwood form of crown: observed through the whole forest this morning. A characteristic attitude of the branches is horizontal. The of them may be horizontal in the entire crown, as the lowest branches may be drooping or sweep downward, or all except the topmost may sweep downward. (Mr. Coney finds "white Redwood" near the Sherwood. It is the result of disturbed nutrition and shade.)

– Chinquapins, not infrequent in the forest from near Alpine to Sherwood, 1st class forest trees 1½ to 2 feet in diameter at 1 foot from the ground. Close grained wood says a passenger

Fort Bragg to

- Ceanothus meanus, common at summit - between Sherwood Home and Alpine. This is about 3000 ft. alt.
- A stage passenger says he has "tried everything for Poison Oak, Grindelia, etc and finally bathed his wrist, the affected part in hot water to open the pores and then put on antiphlogistine. He has had no more trouble.
- From the top of the ridge between Sherwood valley and Alpine (locally called Bald Hill or Bald Mt. one can see the great timber region of the

Sherwood, Aug 12, 1907.

Coast north and south: The eye sweeps 600,000 acres of Redwood and Douglas Fir timber, the most vast body of timber anywhere in the world to be seen from a single point. Southward ridge after ridge blue with timber fills the basins of the Noyo and Navarro rivers and extends eastwards to the summits of the Coast Range. The eyes vision is bounded on the south by the Navarro Ridge which ends in Signal Peak, a landmark in that country. Northward the

Sherwood to Willits

eye has a similar view ranging far into Humboldt county.

— Mrs. C.K. Johnson is a superior woman, the wife of C.K. Johnson, President of the Union Lumber Co. She talked about the enthusiasm of the Brandegees and said that Mrs. B. was a distant relative.

— Mr. W.A.S. Foster says: We sent our salesman to every hardwood dealer in San Francisco to place Tan Oak but none of them would have anything to do with it. We tried to get

August 12-13, 1907.

them to take it up as an experiment, we to send it down in various forms. They would not touch it. I remarked that they were in a rut, used to handling Eastern oak, and suggested you might be trying "to do them" in some way. Now that the government is behind the proposition they are beginning to set up and take notice and take an interest in the experiments, wishing to be informed as to how it comes out.

Ft. Bragg, August 11, 1907.

- Back of Fort Bragg the Redwood lands are in many places being turned gradually into agricultural property. The foreigners especially cultivate little patches between the stumps of Redwood which by repeated burning fail to stump sprout any more. On the hills the borders of the Redwoods do not reproduce or reproduce vigorously as on the slopes or in the canon bottoms. The official Mendocino County Map indicates the limits of the Redwood belt on the inside by a dotted line.

Mendocino Pine Barrens, Aug 11, 1907.
Ft. Bragg.

No. 2963. Castanopsis Chrysophylla. Shrubs, spreading, 9 to 13 feet h. Leaves noticeably long-pointed.

No. 2964. Arctostaphylos Nummularia Gray. Low spreading bush 1 to 2 feet high. Neither in flower nor in fruit.

No. 2965. Ledum glandulosum. 2 to 4 ft. h.

No. 2966. Cupressus pygmaea. Shrubs 5 to 6 feet high. The spray from dif. Shrubs

No. 2967. Cupressus pygmaea. Axe from one shrub 4 ft. high. Notice differences in size of cones.

No. 2968. Pinus contorta. 8 ft. h. (Rough bark on old trees).

Berkeley Sept. 27, 1907

- W.W. Lyman Jr says: On the road over Spring Mountain from St. Helena to Santa Rosa at or near the foot of the grade on the western slope there are Redwoods and also Tan Oak. He says there is abmt 1000 cords of Tan Oak bark on his father's place in Napa Valley.
- Wagner at Briceland counts 2200 cords to ton of Tan Oak bark
- Setchell borrowed my Howell's Flora and bringing it back said: "How little it represents Howell's work!" A very just observation — and of course a pity.

Benicia, Oct. 14, 1907.

- Kullman says: We are willing to pay more for the thick bark of the dry interior ridges than the thin bark of the deep Redwoods. I can tell where bark comes from when I see it. How thin will you accept bark? Depends on two factors: How thin it is and how much there is of it. We dont want a whole lot of thin bark, that is bark that is alike all the way through (in cross section). It has'nt any strength. We want a bark that shows three layers; moss or rough outside, central meat, and a part of the wood inside.

We dont use much quebracho. The quantity is negligible.

Benicia

It is practically as cheap as Tan Oak bark and runs as well. It comes to New York from the Argentine and the small lots that come here are transhipped around the Horn.

We grind 8½ cords bark daily to put on 100 hides, say 12 hides to the cord. We used to get only 10 hides from the cord. We have never used second-growth.

The freight per cord hither to Benicia is $7.00; a fearfully high price; costs as much as here to New York City! Rate same to San Francisco. Rate determined by price of bark in S.F. which is controlled by

Oct. 14, 1907.

the bark coming in by water from up coast. We do not ask for cheaper rate because if rate were lowered the people up country would put the difference on the stumpage. The price of bark each season is a matter in which the human equation enters. I could go out and influence the price of bark $2.00 per ton one way or the other. If it is said bark will be cheap people won't peel. Bark is high and the next season everybody peels. The yield this year is 20,000 cords. Bark does not deteriorate in the shed. It does not leech better one time than another. The

Benicia, Oct. 14, 1907.

Standard ton is 2400 pounds. We weigh our bark here. If a man at Needle Rock wants it weighed there we say all right. We know how much it loses and the loss, 200 pounds, makes it 2600 pounds there. The buyers know how to make good extract. We haven't used it. The Greenwoods people extract plant blows up. We used it. – Herbert Kullman of Kullman Salz & Co, Benicia, California, Tanners.

– Elearus, R.E.C, Forest Tree Culture in Cal, Am. J. For. 1882-3, p. 142.

Niles, Oct. 19, 1907.

– Mr. Rice says: "Below Raymond and Wawona is a sawmill sawing up an oak which is abundant about here. They get logs 2 to 4 ft. diam., one log from a tree. Some boards but mostly small stuff, such as pieces for axe-handles." – From his description of the tree this is Blue Oak (Quercus Douglasii). The spot is (17) miles this side Wawona.

– Mr. Saunders says: "In the Mendocino country they peel the [Giant Chinquapin] for tan bark. The sheep men constantly fire the country to make better feed, even cutting fine trees."

– On the Botany 4 trip to Niles today the results worth a

Niles (Cal. Nursery Co.)

memorandum are as follows:
- Any number of coniferae used in horticultural ornamentation are propogated by cuttings, such as firs and spruces. Apparently these young trees are not as well formed as seedling trees. They call all their firs "spruces", that Abies Nordmanniana is Nordmannian Spruce. Abies Veitchii is Veitch's Spruce, etc
- Sequoia gigantea with strictly declined or pendulous branches. very striking for its narrow form.
- Sequoia sempervirens, glaucous forms, quite pronounced, but rigid selection necessary, and

Oct. 19. 1907.

even then showing a tendency to sport back. Mr. Stephens, who showed us about, a graduate of Michigan Agricultural College, said all their Redwood was grafted on Monterey Cypress stock.
- Cedrus atlantica, with short leaves and its var glauca, remarkably different in color. Similarly he had Cedrus Deodara and its var. glauca.
- Cupressus Guadalupensis and its var. glauca, the variety one of the most remarkably handsome things I have ever seen.
- Cupressus Macrocarpa, golden variety, with large yellow blotches on the sprays.
- Lyonothamnus - they have one

Niles, Oct. 19, 1907.

tree 12 feet high (topped back). Attempts to make cuttings set a flat failure. Now trying layering. Basal sprouts can be made to grow. Seeds rather difficult to get. On Santa Cruz Island where it is 40 to 50 high acc. Stephens (who was with Dr. Franceschi one year) the goats eat off the suckers, and also destroy the seedlings.

– The Calif. Nursery Co imports seedling firs from France cheaper than they can grow them here. Conifers are taken up in the summer, their most dormant period, boxed, put in the bath house and specially cared for until they recover from the

Niles.

shock. The price of a Chile Pine 15 feet high is $1.75.

Douglas Fir does poorly here, dies out badly and loses its leader in winds. Too dry for it.

– Mr. Saunders [for] says: They got out Maul Oak for ships knees at Ukiah. No. 2968A. Chamaecyparis Lawsoniana. Cal. Nursery Co. Cult.

– Blue Oak, W.H. Calhoun, U.C. '05 says: On my father's ranch one mile west of Windsor is a [Quercus Douglasii] tree, an oak, trunk 4 ft. h., branching into 12 branches, the twelve into 40 which spread widely forming a low broad crown 25 ft. h. and 40 ft. broad. The branching which begins dense at the trunk continues dense and

Berkeley, Oct. 22.

forms this remarkably symmetrical crown with short trunk exactly simulating a gigantic mushroom. It bears acorns

– My father, he says, belted his scrub white oak and the trees died in 1, 2, 3 years, some stumps sprouted. The neighbors cut theirs off and got a fine new forest of sprouts.

– 1 Bridges, Conifères de Californie. Thos. Listed by Preston & Rounds, 1907, failed to get it on order, sold.

– Dr. J. Mora Moss came in today to see me. He said. First I want to tell you what pleasure I have had all these years using your Flora. It has been a great satisfaction and pleasure in my hours of relaxation and vacation, and we have taken it to all parts of the state and have found it useful. I have illustrated the margins with figures of the flowers as I have worked them out. It is a pleasure to have full dragnoses after the short ones in Rattan. I said:

Berkeley, Oct. 30, 1907.

That is the kind of thing I've been fishing for but I never before had a bite!

– "Lilium Humboldtii, has two root systems one at base of stem, one below bulb. The only Californian species which has this feature. But the northern (Sierra) Humboldtii has not this. The southern (Santa Barbara) has it. I think the type came from Santa Barbara Island.

Have just succeeded in growing Lilium Parryi. Have put in 16 or 20 bulbs but did not seem to make a go of it. Tried every way. Well, dryness is what they need! In spite of the fact that they are in such wet places on San Jacinto. Still one finds fine plants in dry places." – Carl Purdy

---

San Francisco, Nov. 2-5, 1907.

– Miss Helen Lillis, says of plant names on the Rancho Cantúa:

– Golondrina (Euphorbia, prostrate) used for snake-bite; also mosquito bite

– Brickellia californica, certainly a Brickellia, begins to give out its sweet-smelling odor at dusk.

San Francisco

and it rises out of the dry washes all night long. Not noticeable in the day time. Used as wash for horses' back

- Squaw Cabbage - from her description this is Caulanthus, perhaps procerus, but she says flowers lurid purple or velvety.
- Yerba Colorado or Aigre, has a long slender taproot which yields a water to allay thirst. It may be a Rumex.
- The following have been brought into the region by sheep:
  (a) Yerba Pescar, also called Sheepweed (Eremocarpus setigerus)
  (b). Poverty Grass
  (c). Foxtail.
- Yerba Oso = Rhamnus Californica-

Nov. 4, 1907.

"willow-like shrub," "fruit- in 2's mostly", foliage steeped in salt a cure for Poison Oak.

-Tocalote, did she mean by this Centaurea Melitensis or Echinocystis.

The Rancho Cantua is in the foothills below New Idria.

No. 2968a. See p. 49.

St. Helena, Nov. 29-30, '07

- No. 2969. Oregon Ash. Bark on main trunk 3/4 in. thick, trunk 32 in. diam. at 2 ft. Tree 65 ft. high. Specimen taken from pollarded tree near by.
- Black Oak foliage golden-brown, their crowns dappling the Douglas Fir hillsides and showing strong autumn contrasts.

No. 2970. Quercus Douglasii. "All one cow's milk".

No. 2970a. Aesculus californica Nutt.

St. Helena, Nov. 30, 1907.

No. 2971. Quercus agrifolia. Small tree on Sanitarium Hill road, fruiting heavily.

No. 2972. Same sp. + loc. large tree. This or the next is the tree whence came material from my large pen-and-ink drawing of Quercus agrifolia. All these trees are indubitably of that species

No. 2973. Large tree right at foot of grade. No. 2972, 75 yds. or so above

No. 2974. Large tree with preceding or in that cluster.

No. 2975. Ditto. no acorns this year

No. 2976. Eriogonum vimineum. Stags Leap.

- Visited on a drive the base of the hill country east of Yountville, under Atlas Peak, Rector Canon, Stags Leap Ranch. Hunter by name of Simmons gave us information about country; resident.

Berkeley, Dec. 1, 1907.

- Mr. C. N. Forbes, Bot. 12. has been down to Cedar Mt., south of Livermore. He says the inhabitants were much incensed when he called the trees which give the ridge its name cypresses. The trees are very abundant, up to 65 ft. h.; 2½ ft. diam. trunk near base; "foliage" clumpy not slender as in Monterey Cypress, yellowish not dark green as in Monterey Cypress. Cones very large, up to 1¼ ins. (⅞-1¼ in.) An old resident told him these trees had white wood all through while Monterey Cypress has red heartwood. Cones elliptic to globose. Bark staining purple. Says he saw a Heteromeles arbutifolia 30 ft. h. and 1 ft. trunk diameter.

Berkeley, Dec. 1, 1907.

= Redwood Tree in Colonel Freeman's garden, n.e. corner Ridge Road and LeRoy Avs, Berkeley, set out in Feb. 1905, a young nursery tree about 5 years old. It is now 16 feet 5½ inches tall. It grew 6 feet 4 inches in the season of 1907 to date. Circumference of stump 2 ft. above ground = 11 inches.

= Big Tree, planted same date, the two of about the same size as nearly as can be remembered. Height = 6 ft. 8¼ in. Circumference at 2 ft = 7¼ ins.

Berkeley, Dec. 3, 1907.

Quercus densiflora.

- My estimate of tanbark standing for the northern California county is as follows, revised to date, based on my own observations and influenced by Tracy's letters:-

	Cords
Klamath River	200,000
Trinity "	50,000
New "	20,000
Mad "	60,000
S.W. Trinity (N. fork Eel)	100,000
Van Duzen River	95,000
Seward Ridge	80,000
Blue Rock "	60,000
Rainbow "	30,000
Wilder "	60,000
Bricland District	100,000
Total	875,000

Berkeley, Dec. 13, 1907.

– E. P. Sheldon called on me today. He says: Darlingtonia californica occurs as far north as Coquille Point on the Oregon coast. Dr. W. Hayden says it does not from north of that point. Dr. Hayden is a grad. of the London College of Physicians and Surgeons and was at the time of leaving England one of the finest surgeons of Britian. He is a remittance man. The trouble with him is booze. He boozes all the while, but he is the only man on that coast who knows anything about plants. (Marshfield P.O.)

Umbellularia californica, a very fine body of it, the finest in the world, occurs at Loon

Berkeley, Dec. 13, 1907.

Lake near Ash on the Lower Umpqua. Fine large trees 4-5 ft. diam.

Picea Brewriana, is on south slope Grizzly Peak, east of Ashland. There is more of it east of the railroad in Jackson county than west of it.

Chamaecyparis Lawsoniana, the finest body of it is in Coos Co in the sw. corner formed by the bend of the Coquille River.

Pseudotsuga taxifolia, the finest body in sw. Oregon in the nw. corner of Curry county.

Sugar Pine and Incense Cedar, northernmost localities, n. branch of the Santiam River (Mt. Jefferson region). Nootka Cypress (Chamae. nootkatensis) abundant at

Berkeley.

Breitenbush Bush Hot Springs in same region.

Curry County is the roughest county in Oregon. North of Curry the character of the country changes suddenly. Therefore I do not believe there is any Tan Oak in Coos County. I have cruised all over Coos and I never saw it. Dr. Hayden doesn't know of it in Coos. I doubt if it goes to the Siuslaw River. It is abundant in Curry county - there is a lot of it. The Garry Oak comes in, in quantity, on the Umpqua and north. Oregon Alder is used mich as for making bungs for barrels. The wood is useful for buggy boxes.

Dec. 13, 1907.

- C.N. Forbes says: Matilija Poppy is abundant in the Tia Juana river bed. It is blooming now. Also at High School Commencement time, since they use it in decorating (National City).
Choke Cherry becomes a large tree in the mountains back of San Diego city.
- Brewer, Newberry, Wislizenus, sketches of. in Smithsonian Ann. Rep. 1904, ("Contrib. to Hist. Am. Geol. by Geo. P. Merrill, Head Cus. Geol.)
- Bridges. Son-in-law of Hugh Cuming; mentioned Torreya, vol. 7, p. 1.
- Thurber, Dr. Geo. Cf. Torreya, vol. 6, p. 133. p. 109+
- Wood, Alphonso, Torreya, 6; 134.
Rusby in this article says he was "to a great extent suppressed"

Berkeley

In relation to this remark note his exaggerated statements regarding the Californian flora from his flying trip. He evidently lost his head on account of the diversity and wonder of the California vegetation. See Bolander's comments in Proc. Cal. Acad. Sci, about 1866 or '67.

- Torrey, Dr. John, Torreya, 6, 105
- Eastwood, Alice. Torreya, 6, 120.
- Greene, E. L. See John Hendley Barnhart's skit on chloronyms in Torreya, vol. 6, p. 85 (1906).

- Christmas Trees - It is said 50,000 Christmas trees are now in the S. F., Oakland & Berkeley mkts. They are almost wholly Douglas Fir. I stopped at one store on Shattuck Way, Berkeley. The stock came from Oregon,

Dec. 19, 1907.

$2.00 per for a car-load from Glendale. He says a car came from Washington at $67.00 - the difference = water competition. Roughly I should say half the trees were saplings. The ones taken from the tops showed it plainly. They were less slender and less symmetrical. There's no denying the saplings make beautiful trees. He pointed out one ten feet high, representing 6 yrs. growth and doubtless about 8 yrs old, the price $1.50. I noticed one White Fir in the lot.

- Henry Morse Stephens, the most brilliant man in the University and, I was going to say, the most unreliable. His great weakness is

Berkeley

playing to the gallery, he has learned to feed on that sort of thing and he can make the groundlings shout all right. Many are "on to him", to use slang, more are not. At the Faculty Club the other day he was the centre of an admiring group, the kind that cluster round him when he feeds. x Some one at the next table drily remarked: "Sham giant but real pygmies!" - unkind but very clever.

- Haënke, Tadeo. I Moses, who has been a year in South America, has collected a great quantity of books to add to his library on South America. Has become interested in Haenke

Dec. 31, 1907.

and has brought together a lot of material concerning him. Haenke's Manuscript "Descripcion del Peru" was in some way acquired by the British Museum; some one copied it, took it to Peru and it was published by government through the influence of Ricardo Palma, a prominent governmental official with intellectual attainments. It bears the imprint "Lima, 1901". A biographical sketch of a very few pages precedes the text proper which is mainly concerned with social affairs. There is a portrait!

He (Moses) also acquired

Berkeley

a pamphlet entitled:—

Tadeo Haenke, Escritos precedidos de Algunos apuntes para su biografia y acompanados de varios documentos illustrativos, por M. V. Ballivan y Pedro Kramer. La Paz, 1898.

It contains miscellaneous writings of Haenke and also a list of his MSS in the National Library at Bogota

There is also a lot of Haenke material preceded by a considerable biography published in vol. 1. of the National Library archives of Buenos Aires.

When I first spoke to Moses of my interest in this botanist, he laughed and said: Haenke? "Ah. Yes. he was the fellow who got left!" (at Cadiz!)

January 1, 1908.

— There are 2 Big Trees (Sequoia gigantea) near Botany Building, just across roadway west. Planted in 1901 (or one year earlier maybe), about 1 ft. high at planting, maybe 16 inches. I have now driven a redwood stake at base of each tree, 2 or 3 feet from trunk, and between the trunk and sidewalk north. The stakes are cement-driven down flush with the surface of the ground. They are to serve as bench marks for rates of growth in height.

Measurements taken Dec. 24, 1907.

Tree nearest Bot. Building:

Height = 13 feet, 9 inches.

Girth at 1 ft. above ground = 2 ft., 1¼ in.

Tree furthest from Botany Bldg.

Height = 12 ft., 6 in.

Girth at 1 ft. above ground = 1 ft., 7¼ in.

Vacaville

- Digger Pine. - Southernmost locality in Vaca Mts is on Pine Peak, perhaps a few trees scattering southward. It is most abundant on the ridge back of Putnams Peak.
- Platt likens my drawings of fir cones to owls on a branch. Yes, said I, and the Spruces are monkeys!
- The Putnams Peak series of rocky masses consists of
  1. Putnams Peak
  2. Drakes Peak, east of Cantelow's (Had this name from Elkan Robinson).
  3. North Rocky
  4. South Rocky.

January 12, 1908

R.H.

- Platt says: "Washington Hemlock (Tsuga heterophylla) - 2 to 3 ft. diam. or less = average ("millions of 'em"), Grays Harbor country. On alluvial flats bigger, near streams.

Douglas Fir, one back of my cabin, 15 ft. diam. at 10 ft. above ground. Bark average 1 - 1½ ft. thick; S. side thick, N. side thinner & crumbly, not worth a damn. Bark cut off, used for fuel. Average thickness trunk, 3 to 6 ft. Sometimes badly broken in top. - Grays Harbor country. When thus broken resembles a huge Sequoia gigantea and when the snow is heavy in the top of it, cauliflower-like, it is beautiful!"

Vacaville

- No. 2977. Quercus Wislizenii (discarded) A.N. winter buds. Araquipa Hills.
- No. 2978. Aesculus Californica. Araquipa Hills, Osage Cañon. Plenty of it well up and also on n. slope Cement Hill. Buds very red.
- No. 2979. Quercus Douglasii, young tree. Winter buds. Araquipa Hills. Osage Cañon.

No. 2980. Quercus lobata, low scraggy trees for the species, at highest summit - Araquipa Hills near U.S. Geol. Survey Bench Mark, his trees in full leaf, showing some new shoots.

No. 2981. Quercus Wislizenii all from one tree. Osage Cañon Araquipa Hills.

January 6, 1908.

No. 2982. Quercus Wislizenii Osage Cañon, Araquipa Hills.

Reproduction in the Vaca Hills. Araquipa Hills

1- Quercus Douglasii maintains itself, noticed young growth 15 or 20 years old which has come up much later than the time when cutting for firewood first began in these hills.

2- Buckeye. Did not notice any seedlings. Think it does not extend its original area much. Cattle may browse seedlings down but the seeds get little chance to bury. Ralph Platt says squirrels eat them, I asking him if they did.

3- Quercus Wislizenii, little

Vacaville

reproduction. I noticed the shells of acorns about the mouths of squirrel holes.

4.- Quercus Kelloggii, only a few trees in this little range of Arequipa Hills. There is one towards the upper part of Osage Canon, with leaves not deeply lobed, suggesting a bit of Morelus blood may be. It seems to me now that I remember having collected from a tree in Lead pipe Canon about 1891.

5.- Quercus Wislizenii, the largest tree in the range stands on n. slope towards the head of Hawkins Canon not far from highest point of the Arequipa Hills.

January 6. 1908

It is 50 feet high, 11 ft. circ. at 4 ft. above ground, 66 ft. diam. crown. It is not a large tree of course save only as it surpasses others of its kind in these hills. Its crown conforms to the slope of the hills.

6.- Quercus Lobata goes to very summit of the hills in a small-sized form, being somewhat scraggly like Quercus Douglasii. I was interested in the persistent foliage of some trees. The crown very full for the season. Many of the shoots were evidently recent, i.e. of the last three or four months.

Berkeley

E.W.

– Prof. Hilgard says: "All soils in California are calcareous. That is because there is so little rain. There is nothing to take the lime out of the soil – save only in the high Sierras. I am amused at these eastern ecological papers – long lists of hydrophytes, mesophytes, etc, but no word of the soil! Fernald in his Gashe paper makes a strong point of lime, swamps, rock crevices, what not. There are certain plants to be found if only it be limestone. He goes further even than I."

(I showed him some

January 16, 1908.

remarkable leaf variations of Quercus Wislizenii which I had just collected) "Ah, yes. And that Gold-powdered Oak, what do you call it? yes, Chrysolepis, I have seen that in the Sierras, the new shoots so different – one could scarcely believe his eyes! Engelmann* used to say: How are we to tell these oaks of California. The leaves are so different on one tree. There is no being sure of the species."

"Some people were standing near the agricultural building looking at the native trees. I helped them

* Geo. Engelmann.

Berkeley

to the names of the laurel and the live oak. Why, protested they, this is not a live oak! Not like our Live Oak! Said I, You come from near the gulf shore and know the Live Oak of the South. Yes said they. Well this is the difference. The Live Oak of the south makes ship timber. This Live Oak is so poor wood that it will split both ways, crosswise as well as lengthwise! It is so brittle. Indeed, I have seen limbs being broken up for firewood with the back of an axe!

January 16, 1908.

I collected a good deal in Mississippi. The results appear in my publications of that time. Collected in Washington in early 80's. Greene named one of these plants after me, but have never heard of it since! Always collected whenever I was out in the field. In Mississippi it was difficult to dry out my plants. Often had trying times walking with a great bundle on my back. In Portugal I was going out of Lisbon on a journey of 15 miles and my pack slipped and my plants were badly scattered."

Berkeley

Samuel
– Dr. Willey said: I have just been down to Monterey again. I want something to read relative to the Monterey Cypress. I suggested it was an interesting tree. Oh, he said, a remarkable tree. Those near the sea show such resistant qualities (And he drew himself up, 84 years old, but there was a fire in his manner as he raised his clenched hand and showed by gesture how the tree defied the onslaught of the storm.)

Dr. Willey planted the original forest of Monterey Cypress and Monterey Pine

January 16, 1908.

University
and Eucalyptus on the grounds. The nursery beds were up the cañon – the seedlings being germinated on the grounds. The younger Willey says Prof Durant had a 10–15 acre orchard of pears, apples, peaches, apricots and cherries from Stiles Hall to Union st. and south. The old negro's house on Union, was there at that time.
↑and Alleton Way.

– Herbarium Methods – Drying Plants. Prof. Hilgard, whose call at my office I noted 5th page back, came for the purpose of calling my attention to an article in Science, Jan. 10, '08, p. 69 "A Better Method of Preparing Herbarium Specimens" – Kellerman W. A.

Berkeley

-C.N. Forbes, Bot. 13., has just returned from the south, National City, etc. He says: "Jepsonia Parryi is very common between National City and (Dulzura) 12 miles back. It comes up on bare ground, moist slopes, the leaves lying flat on the ground and looking like little Maple leaves. The lot of bulbs I brought were gathered in about 15 mins. (about 25 of them). Could gather a bushel in a day. The children gather them to eat and call them cocoanuts. They become in time deep-seated, 6-8 inches, because the new bulb forms immediately under the old one."

January 16, 1908.

-Miss Frida Niedermüller, Bot. 4. gathered some notes in Santa Barbara on Lyonothamnus floribundus. Dr. Franceschi has a tree in his Botanic Garden which he brought, root and stumps, from the Island of Santa Cruz 13 yrs. ago. He planted it, a shoot shot up from the stumps and forms his present tree. It has fruited for the first time this last season. It is propogated from seed. Cannot be propogated any other way. He has tried cuttings in vain.

- Roezl, coll. in Calif. See Bot. Gaz. 44, 414 (Parish on Washingtonia).

Berkeley

- Quercus Garryana. "Oak balls, the group of trees literally covered with them, the surrounding trees comparatively free. Low trees, 3000 ft. alt., Ashland, Oregon," - Miss Charlotte Hoak, Aug. 13, 1903.

I have just sent part of them to Sudworth with request for name. = Holocaspis multimaculatus ashmead. See litt. Howard, file '08 cal trees

- Juglans californica. Mr. M. L. Russel, Bot. 4., says it is on s. side Santa Monica Range but most common on n. side. The postoffice for the Russell Ranch is Newberry Park. It is common near there and on the n. side of the Simi

Jan. 21, 1908

Valley, and all through the hills to Los Angeles. The seedlings brought down from the mountains and planted at the ranch are sensitive to frost the leaves being blackened - after two years they become hardier. Mr. W.B. Parker, Bot. 4., says they are near Whittier.

- Ink-stains on books. Wash spot with soft water & camels' hair brush to remove as much ink as is possible; 1 oz oxalic acid to 1 pt. water for removing remainder of ink; wash stain with clear water and dry with blotting paper.

Berkeley

– The difficulty of deciding on a suitable term for the so-called flowering parts of pines is now before me. They are certainly not as to the female parts to be called pistillate as Sargent does. The term pistillate I use used to hit Dr. H. H. Behr as being queer and he poked fun at it in his humorous way. Said he one day: "I have some pistillate Bostonians coming to see me today"!

– F. T. Bioletti – met him leaving the University early this morning. He is leaving for good. Going to a ranch in a valley of the

January 21, 1908.

Gabilan Range below Fremonts Peak about 12 miles from Hollister. He was loaded down with some of his office "penates" – bocs horns (from South Africa are they?) – long straight pointed horns very slightly diverging, and similar "lares". He has not found his place here in every way pleasant since his return from S. Africa and has concluded to buy the vine business. He says he has a splendid place for vines.

– Hayes, Dr. Sutton, Calif. collector. Cf. Bot. Gaz. 44, 409, footnote, (Parish on Washingtonia).

Berkeley

-Collard- Prof. Hilgard has just been telling me about a variety of the cabbage, tall as his head, with only leaves on it, grown in the South in early days. When on his Mississippi Survey work he was invited from his camp where he had good cooking to dine with a senator in the back woods. They had collard leaves boiled and rancid bacon fried. His hostess noticed he couldn't eat and said: Maybe you don't like collard!

Collard differs from the Jersey Cabbage in that the latter has a little head at top.

January 21, 1908.

-Auburn botanists:- Entered today Dr. J.C. Hanver of Auburn, Cal., Dentist, who is interested in the general natural history of that region and has done Cache-fossil work for Merriam. He has taken a great many photos of native trees and is interested in securing high-class results. He is his ambition to take a really good picture of a tree.

He says there are 13 trees in the Placer county Big Tree grove. This grove is in a wilderness of a country and one would very easily miss it in passing across the country. Deadly easy. Like

Berkeley

searching for a needle in a haystack – a few Sequoias in a great forest. He was accompanied by Mr. Henry Rose, East Auburn, a young fellow who knows the region well.

He wrote a natural history paper for the Auburn local paper last week. He says Mrs. Ames died at San Jose two years ago. The local people at Auburn or vicinity interested in plants are:

Miss A. A. King, Loomis
Mrs. Hughes, Auburn
Mr. Charles Philips, Auburn.

Nutmeg Tree is within 1½ miles of Cole's Station, or about 6 miles west of Grizzly P.O.

January 24, 1908.

- Early Tree Planting on Grounds:

Dr. Hilgard says: The selection of the University site was guided largely by the presence of the five native trees. There was as good land and as sightly a prospect elsewhere along the hills but no such trees. As we went over the site viewing it and came down to the point where Blackberry and Strawberry Creek come together the party was much impressed by the oaks and their exceedingly venerable appearance. There was no such oaks elsewhere in the neighborhood of Berkeley.

Berkeley

We had to acquire title from several different owners. One day there came word to us that cutting was being done on the property. We found a lessee cutting up the limbs of trees for wood for the S.F. mint, removing them from the trees. We appealed to the owner and the destruction was soon stopped and no more did we fear for the trees. Our nursery for new planting was up at the place now occupied by Suchi dairy, a tract which the regents sold.

[See note written by Dr. Kelley at my request in file - Trees of Cal.]

Jan. 24, 1908.

- Hilgard, Prof. E.W., sketch of life in Pac. Rural Press, July 2, 1892, vol. 44, p. 1.
- Street trees, penalty for removal or mutilation by abutting owner or any other unauthorized person, $100.00, Sec. 2742 of Political Code.
- Teratology of Fraxinus Oregana. fruit with wing so 1 in cross-section, 3-winged.
- Torreya californica. Embryo at upper end of fruit. It is one line long (2½ mm. in my material Yosemite, 1896) and has 2 cotyledons. Just made two counts stamens; one cluster 32, the other 30 stamens, both from Bolander's Big Trees material, stamens apparently always in 4's.

Berkeley

-Taxus brevifolia; counts of stamens

M.S. Baker, Hatchet Creek, Shasta Co

Stamens 12, 12, 12, 12, 12

Pollen-sacs, 6, 5, 6 6 5 6 4, 4, 4, 5. 6

Gardner, Camano Isld, Wash.

Stamens 10, 10

Pollen-sacs, 6, 9, 5, 4 7,

Clark, Mendocino Co. Cal.

Stamens, 10, 8, 7, 11

Pollen-sacs, 6, 6, 6, 7, 9, 5, 7

6, 5

- C.M. Forbes, U.C. 08, says, Tricho. stenia laxum near San Diego is called Romeo. This is the English-speaking peoples approximation of Romero, Spanish for Rosemary. (He meant T. lanatum!).

Jan. 27, 1908.

- Miss Alice Eastwood has gone to Colorado. No one seems to know when she is coming back, if at all. Mrs. Brandegee now seems to be the botanical adviser at the academy. The whirligig of time at the academy! Certain observing ladies in Berkeley look over their eyebrows and say that Dr. C. K. Gilbert, U.S. Geol. Survey, has been paying attention to Miss Eastwood and that - etc, etc. Shades of Cotton Mather! That Berkeley gossips should thus thrust their noses into our botanical lines!

San Francisco

– All night with the Lillis family for a visit. Mrs. Lillis had a great deal to say about the floor of the San Joaquin. He doesn't believe it alluvial filled. Well boring 2200 feet deep discloses alternate layers of clay and sand – and no bedrock. What a trough it must have been. The hog wallows he claims were volcanic, the alkaline areas salt vestiges of the inland sea. The flora of each of these areas is interesting he says, but I did not get much that was definite. His big ranch is the Rancho Cantua, part of Idria. He says that

Feb. 1. 1908.

a long narrow portion of the earth fell right out, for a great distance.

Berkeley, Feb. 8.

– Alnus rubra, in fl. as yet. Still holding green (not) leaves of last season on one side tree. Mr. Saunders, Bot. 4., says A. rhombifolia at Ukiah was in anthesis, with lank catkins in early Jan. He says he didn't examine them to determine that pollen was being shed. Says wood used to smoke meats and especially fish on Mendocino coast both by Indians and Whites. Rubra, – long-branched, Rhombifolia, short-branched. Is this a good distinction?

Berkeley

- Symphoricarpos racemosus, shrubs now in full leaf. Miss Griffith, Bot. 4, says berries regarded as poisonous in Sonoma.
- Vicia gigantea, new growth 4 ft. high.
- Common names, certain ones used as if in a familiar or endearing way and applied to widely different species in widely different localities. Johnny Jump-up may be so applied, just as we say "Bub" to boys whose name is not Bub. Of course not girls so loosely, still very loosely.

Feb. 10, 1908

- Mrs. Brandegee says: "E. L. Greene lost his place at Vallejo and Yreka as Episcopal minister because of Sodomy. At the Academy the boys came in to pester him (blackmail) and I got tired, raised the window, blew the police whistle, and soon a policeman was in. The boys stopped their visits. We were good freinds in those days. He knew a lot more about botany than I did and I was glad to sit at his feet and learn. But when arguments came about his species and I argued him out of many of them — trouble developed."

Berkeley

- Lyonothamnus floribundus, Planted 1897 or 1898, says Wolley of the tree in the Botanic Garden, our only tree. It was 2 years old when received from Franceschi of Santa Barbara, and was kept one year in the frame house. It is now 35 feet high, as per estimate of my eye, and 2 ft. 5 inches circumference at 2 feet above the ground.

- Pinus contorta. Material from Mendocino pine barrens. Cotyledons in embryo, counts as follows: 4, 4, 4, 4, 5, 4.

- Eisen, Gustav, The Raisin Industry in California. $3.00. Not recent I think.

Feb. 13, 1908

- Miss Beaser* who comes from or at least is acquainted in Nevada City says Viola pedunculata is called Johnny Jumpers there and Dodecatheon Johnny Jumpups. Anything which has a stem rising with a flower from leaves on the ground is likely to be called Johnny Jump-up.

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*My advanced botany class. The species must be V. douglasii Steud, since V. pedunculata is unknown from the Sierra Nevada except for south.

Moraga Ridge

—No 2983. Quercus agrifolia. Very spiny-leaved small-leaved bush 8 ft. high, head of San Leandro Creek, Oakland Hills.

– No. 2984. Pinus tuberculata. Scattered along the whole length of the Moraga Ridge bushes galore, scattered trees up to 40 feet high and 14 inches in diameter. I find trees fruiting at 1½ feet high, 7 yrs old, 18 cones on a tree 11 ft. high. All the cones in the tree (the one 14 in. diam.) were open up the trunk as high as 8 feet (from 2 feet) Trees often with 2, 3, or several or bushes stems from the base, either branching of axis or again the lateral branches becoming erect,

Feb. 23, 1908

(i.e. the lowest lateral branches) and competing with the main axis

Shrubs of the Moraga Ridge.

– Castanopsis chrysophylla var. minor, 6 ft. high, bushes as broad or twice as broad as high; leaves bough-like

– Pickeringia montana, 5 ft. h.

– Arctostaphylos Andersonii

– Dendromecon rigidum, 4 ft. high. Leaves very small.

– Adenostoma fasciculatum H. & A. 2 to 6 ft. high.

– Heteromeles arbutifolia.

– Quercus dumosa,

– Quercus Wislizenii fruticosa 3 ft. high.

– Vaccinium ovatum, 4–6 ft. high, plentiful, and showy with leaves

Moraga Ridge, Feb. 23, '08

bronzed by the cold or frost.
- The Moraga Ridge of these notes is the ridge bounding San Leandro Cañon on the east. San Leandro Cañon comes next east after Redwood Cañon and is the channel for headwaters stream of San Leandro Creek. Moraga Ridge northward terminates in Round Top.

No. 2985. No number.

Berberis repens Lindl.
Big flat, Del Norte Co.
July 13, 1907

San Juan Bautista
March 3, '08

- went down to the Fremont Celebration at San Juan Bautista. Changed from S.P. at Chittenden to San Juan - Pacific, and met its most distinguished official Mark Reagan, remarkable for his flow of language, his knowledge of the country hereabouts, its history and its lore and his power to give a dramatic setting to his stories about it. Pacheco Peak? Yes that was named after a Peruvian Indian. Mexican Government after the war of Independence owed him large sums of money and paid him in lands in California. He chose all the country about that

San Juan Bautista

peak and built his house at the foot of it. Gabilan? Yes, you see the top peak, then the little peak below, well that's the head and bill of a gabilan. The Spanish looking at it from the Mission said it looked like a gabilan. The mass of dark trees filling the cañon made the body of the gabilan, the spurs or bare ridges one on each side made the wings. A gabilan is an eagle. The Indians had sacred places of sacrifice on the hilltops. You see that cross up there? Yes the Franciscan converted all

March 3-4, 1908.

all the Indian heathen worship spots into Christian places. [How much that sounded like early Rome!] — Then Mark Keegan told the story of the Five Merchant Princes of San Juan, how their lack of public spirit kept the railroad away from the place and left San Juan weeping high and dry, they and their families are coming to a bad end.

On the road to the Mission is a row of Cottonwood trees, the old Alameda. An Indian was hung on one of the trees. It was found he was innocent, the tree died as did all the trees on that side the street.

Monterey, Pine woods 2 miles west. March 5, 1908

No. 2986. Pinus muricata D. Don. Trees mostly small (3 to 6 ft. h.), one 8 in. diam at 2 ft and 30 ft. h.

No. 2987. Zygadenus fremontii Wats. Pine woods. See 17 pp. ahead. "Never any higher than this" - Abbott. Tall form also grows here. var. minor!!

No. 2988. Sanicula Slender laciniata H. & A. or quill-like root, but tuberous. Pine woods, abundant.

No. 2989. Sanicula octopoides H. & A. Abundant. Leaves flat on the ground.

No. 2990. Ceanothus dentatus T. G. On Pine barrens with Bishop Pine.

No. 2991. Arctostaphylos. On pine barrens with Bishop Pine
A. vestita Eastw.

No. 2992. Castanopsis chrysophylla minor. Low spreading 3 to 5 ft. h. Leaves trough-like. On pine-barrens with Bishop Pine.

No. 2993. Ceanothus rigidus Nutt. Branchlets (of the specimens) cut from a branch where they were disposed in 4 ranks. Pine Barrens.

Monterey Co

No. 2994. Ceanothus thyrsiflorus Esch. Pine woods towards ocean. = C. dentatus

No. 2995. Lathyrus vestitus ssp puberulus g. Perennial stems on pine branches up to 7 feet, the new growth from the old stems. See p. 113.

No. 2996. Spergula arvensis L. Pine woods, Monterey.

— Went with Dr. Abbott to the pine woods west of Monterey, passing through the Presidio, over the ridge and down the western slope, about 2 miles in all. Here we found the Bishop Pines. The soil and general conditions were strongly suggestive of the Mendocino coast Pine Barrens. There is also the dwarf Castanopsis chrysophylla, and low bushes of Ceanothus rigidus and dentatus. Also Arctostaphylos tomentosus. (Dr. E. K. Abbott who went with me, is a graduate of Hillsdale College, Michigan, 1869.)

Pt. Lobos, March 5, '08

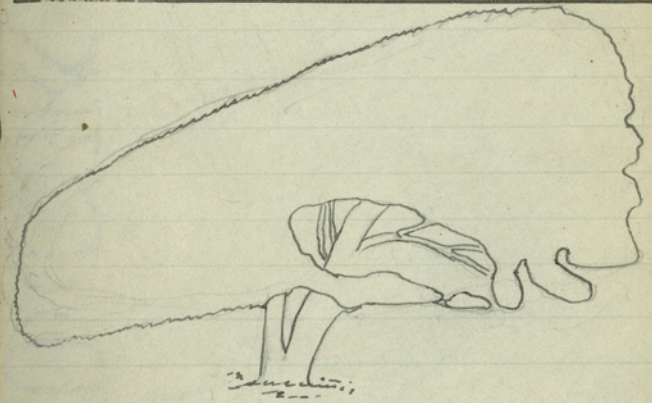
-The Monterey Cypress at Pt. Lobos makes a splendid assemblage, far finer and more interesting than at Cypress Point. The ocean is cutting tongues into the land or pile of rocks forming Point Lobos headland. There are regular firths. The Cypress are in 2 bodies on the two headlands or rocky points and also extend out onto these tongues of land. They cling to the rocky walls of precipices that fall almost perpendicularly to the sea. As the sea undercuts, the rocks above tumble, the trees lose their foothold and go crashing into the sea.

Monterey Cypress, western grp.
Cylindric trunk, 12 ft. circ. at 4 ft., 65 ft. h.
Buttressed " , 14 " " " 3 ", 60 ft. h.
The first has a narrow crown.
" second " " spreading "

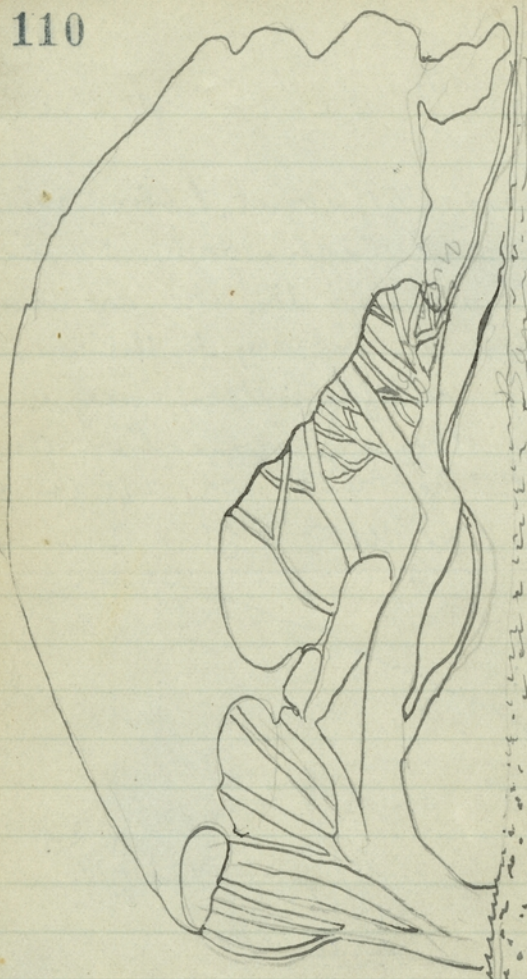
Pt. Lobos. Mar. 5, '08

-Cypresses at Point Lobos mostly 30 to 40 ft high, some 50 ft. h.

Board like trunks are always flattened contrary to the wind. They are often very angular from losing branches. One board-like trunk was 2 ft. 6 in. x 9 in., another 3 ft. x 9 in.



Hindsloan Live Oak, Quercus agrifolia, between Pebble Beach and Cypress Point.



Wind-controlled Live Oak – Pebble Beach to Cypress Point.

Cypress Point. Mar. 6, 08

– Monterey Cypress, trees extend from Cypress Point in a continuous belt as far as the sand hills where the shore turns sharply back from the ocean. There a lot of them, a tremendous lot in a long and narrow strip. They are right on the coast line and some distance back from the shore. I saw none further than about ⅓ of a mile, or scarcely that but I did not investigate the back woods, where monterey Pine in dense stands press closely upon them. Right on the shore they are alone, back of it mixed with Monterey Pine.

Cypress Point to

- Monterey Cypress tree, 15 ft. 8 in. circ. at 4 ft., 65 ft. high, first tall tree met with coming from Pebble Beach. Buttressed.
- Bark of Monterey Cypress Grayish brown, roughly fissured into interlocking ribbon-like strips of varying breadth. On young trees reddish brown, the ribbons superficial.

"Monterey Cypress
Measured Trees

Circ. 12 ft. 7 in. at 4 ft., buttressed, 60 ft. h.
" 11 " , " " , swollen at base, 65 ft. h.

The second tree had a circumference of 16 feet at the ground.

Pacific Grove, Mar 6 '08

Old Trees with Flat Hat-like Crowns. - Monterey Cypress.

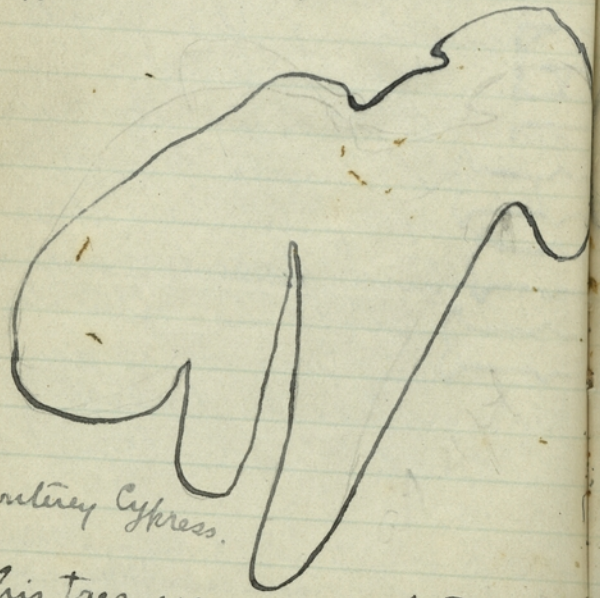
There are a striking feature of the groves most exposed to the strength of the winds. Their characteristic is the close compact nature of the small crown. The weave of the branchlets in their green hats is very close as often shown by the tiers or layers of branchlets below which have been killed out.

- Cont. from p. 107. Lathyrus holanderi Wats. var. violaceus Jepson. No. 2995.

Cypress Point to

Buttressed Trees.

Trees are buttressed in response to strain on top. This strain is not wholly load of one-sided crown but wind strain on top.



Monterey Cypress.

This tree was most strangely buttressed. It was 15 ft. circ. on drawn tape at 4 ft. 70 ft. h.

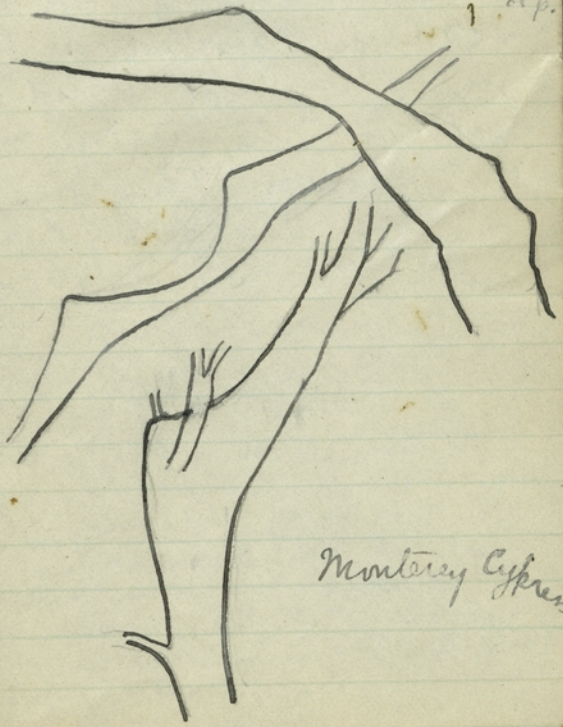
Pacific Grove, Mar. 6, '08

Board-like Trunks.

These are very characteristic structures, 1 to 3 feet broad and 6 to 9 inches thick, with curious elbows.

Cont. next p.

1



Monterey Cypress

Cypress Point to

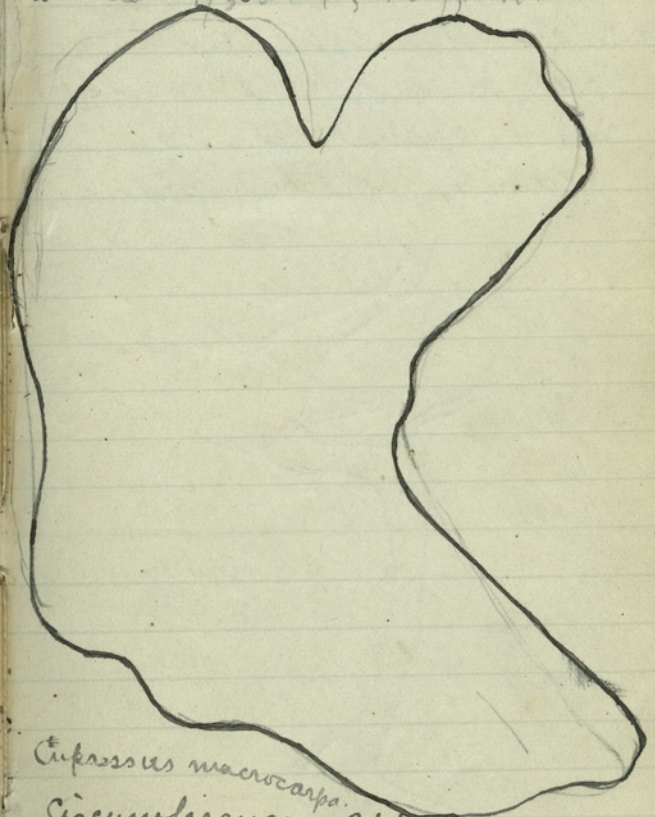
These board-like structures are evidently in response to wind strain or perhaps more correctly crown strain exerted in the main by the wind and not by the weight of the crown. They are, so far as I observed always with their narrow edge to the wind

Size of Cones.

The largest cones found were on trees at Point Lobos. They were huge, 2 in. long and nearly globose, being 2 in. diameter from tip to tip of umbos. On same tree were cones only 1 in. long. I saw 2 or 3 of these large cones in a cluster, but the heavy clusters of 30 to 50 consist of cones 1 to 1½ inches long. Good-sized cones were also found on Cypress Pt.

Pacific Grove, Mar. 6, 1908.

Buttressed Cypress - Cypress Point.

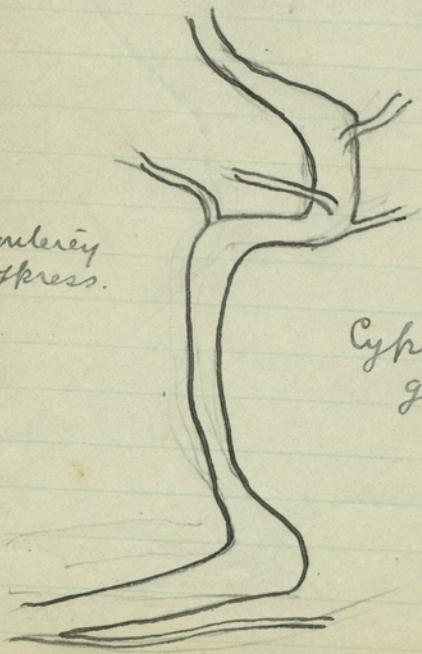


Cupressus macrocarpa.

Circumference = 21 ft. 3 inches at 4 ft.; 70 feet high.

Cypress Point to

Board-like Trunks.
The twisting and turning back and forth is often extreme but it is mainly in one plane.



Monterey Cypress.

Cypress Pt. grove

Pacific Grove, Aug 6, '08.

Age of Monterey Cypress.
Trees grow rapidly when young. I have no reason for thinking they do not grow as rapidly in the woods here as in cultivation.

I found one cut (sawed) log in Cypress Point woods. It was 2 feet in diameter and had 98 rings. Evidently the cut was near the base. Sawed in order to clear wagon road. Cut a long time and rings very indistinct.

Cypress Point to

– Quercus agrifolia – very interesting wind-blown Live Oaks on low flat plateaus just about 1 mile before reaching Pebble Beach, going west. See sketches 11 + 12 pp. back.

– Monterey Pine, 2 large trees in woods, by roadway, in swale, 1/2 mile from entrance gate (to 17 mile Drive) on Monterey – Sur Road.

Circ. 11 ft. 2 in. at 4 ft., 105 ft. h.
" 13 ft. 8 in. at " ", 115 " "

Bark of first tree very mighty broken, 4 1/2 inches thick.

— Slender trees of Monterey Pine in dense stands often 100 ft. high.

Pacific Grove, Mar. 6, '08.

– Monterey Pine at Pebble Beach, cut down (-saved), Diameter 2 ft. 9 inches at 1 1/2 feet. 42 rings + 5 = 47 years. Rapid growth as shown by the big rings, which are mostly 1/2 in. broad. Maximum 7/8 in. in 15th year. Last 10 years slow growth 1/5 in. or 1/4 in. in breadth. Native tree.

– Most Monterey Pine 40 to 60 feet high and 1 to 2 feet trunk diameter.

No. 2997. Pinus radiata, in fl. Pebble Beach.

Cypress Point to

Monterey Cypress.
Small individuals.

- I did not find any very small individuals comparable to those of the Mendocino coast. The country between Pebble Beach and the county east of the northerly cypress needs to be searched. That is pine barren country back from the shore. The smallest trees were as follows:— at Cypress Point, back of shore line under large trees, 3 to 5 feet high and spreading widely. In some cases with the ascending axis

Pacific Grove, Mar. 6, '08

dead and the branches flat on the ground. (living lower) A few cones. Not narrow crowned as in Mendocino pine barren type, and not fruiting abundantly like that.

A small tree 6 ft. high, 1 inch diameter at base, noticed at Point Lobos was dead. Overshaded. Bore cones at 4 ft. above ground, a few on leeward side.

- Bishop Pine, No. 2986. Three whorls of cones common on the young trees. Cones in a whorl 6, 7 or even 8!

Cypress Point to

Monterey Cypress
Its Form.

Form of the tree little affected by winds save as mechanical stress. at Point Lobos two trees stand side by side. One is a young tree but tall, with slender pointed pyramid-like crown, showing no effects of wind whatsoever. The other tree, less exposed if anything, is an old tree, all battered, with flat-topped crown. The most unsymmetrical trees are those nearest the sea; in protected situations as a rule

Pacific Grove, Mar 6, 1908

one finds the regularly symmetrical pyramidal individuals.

In sheltered woods at Cypress Point I noticed two trees in company of Monterey Pine, remarkable for their open crown, finger-pointed branches, and narrow-pyramidal outline. They were 50 ft. high, and 14 and 15 inches diameter respectively at 2 feet above the ground. Another tree with less open crown but equally symmetrical was 80 feet high and 2 1/4 ft. diam. at 2 feet above the ground.

Cypress Point to

cont.

The unsymmetrical trees are of three types: Trees with long lower branches and irregular crowns. Trees without lower branches, or only remnants, the trunks tall, and bearing an irregular but dense flat hat-like crown. Trees crouching and building up to leeward a dense wall of foliage. Sometimes a company of such trees will so join on to each other as if they tried to form a high protecting wall for a leeward shelter.

Pacific Grove, Mar. 6. '08

Buttressed Trees. Monterey Cypress.

See back 10 + 13 pp. Trunks may be heavily buttressed as explained, or swollen symmetrically at base (see bottom of page 15 pages back), or they may not be buttressed at all or inappreciably. In the latter case the tree may be sheltered (see bottom page, 19 pp. back) or exposed like a tree in Cypress Point grove which is 40 ft. high, on forefront of ocean, narrow crown, irregular top, dead branches below. Circumference = 6 ft. 7 in. at 4 ft. Not evidently buttressed.

Monterey

No. 2998. Cupressus macrocarpa. Pt. Lobos. All material under this number not from one tree.

No. 2999. Cupressus macrocarpa. Cypress Point.

No 3000 on page 143

Monterey Pine – Distribution

The rolling ridge back of Monterey forms a long crescent from Pt. Pinos towards El Toro. It is wooded rather densely with Monterey Pine, pure stand. There are "opens" toward the middle of the range where the Carmel Road crosses. From Pt. Pinos to Cypress Point and

March 6, 1908

eastward to the Carmel Road is a dense forest. Then some bare hills spotted with small clumps which become more numerous and larger as the eye ranges eastward. There are a few clumps on the steep hills south of the Carmel River, a few trees here and there, more of them near the Sur Road, becoming a dense forest on the Pt. Lobos ranch. Frank Hatton says, and is confirmed by Trotter, that there are two trees south of Malpaso Creek one on Rock Creek and are near Notley's Landing.

Monterey Sand Hills.

The Monterey Sand Hills occupy the country from Del Monte nearly to the Pajaro Valley lying next the ocean. They are mesa-like hills. In only a few places is there shifting sand. It is covered with Bush Lupines 3 to 6 feet high and great quantities of dwarf Live Oaks covering extensive areas and making miniature forests. This is the only place where I ever saw the wind dwarf a whole forest. These little oaks are round balls cut off at 4 to 6 feet. There are tens of thousands scarcely larger than the largest

March 6, 1908

Bush Lupines. They gave a monotonous heath-like effect to these wide uplands which are only a little undulating. My observation is wholly from the railway train.

The Redwoods picket the ridge of the Santa Cruz Mts., southward until they are opposite Watsonville in the Pajaro Valley. Then they cross the Pajaro River to the bluffs of the South bank about Chittenden - the only redwoods in San Benito county.

Along the Pajaro River between Aromas and Chittenden are great

Gilroy Valley, Mar. 6, '08

quantities of Poplars, very striking with their white branches, in the river bottom of the Pajaro River. They form a narrow grove or line for several miles. Must be Populus trichocarpa.

In the Gilroy Valley are many fine trees of Quercus agrifolia. Many of them, especially in open situations, show weeping characteristics. They (this way) are being cut down for cordwood on a rather extensive scale.

Berkeley, Mar. 14, '08

- Mr. H. A. Greene of Monterey who is forming tree planting clubs all over California, especially in the schools, and whose interests seem to be branching out as far as Pennsylvania and Illinois, came in to call yesterday afternoon and talked like a streak for three mortal hours on 15 minutes worth of matter. Being located at Monterey he is working on our two hardiest and most valuable trees for coast planting. The Monterey Pine will grow on the shallowest soils and stand drought but not the

Berkeley

drought out of the coast climate any more than the Monterey Cypress. Hilgard says Monterey Pine dies after 25 years in Southern California. Greene is a brother of Clay Greene, President of the Lambs Club of New York.

March, 1908.

- Sand-dunes in California, plants changing direction. Cf. Pop. Sci. Mo., Mar. 1898, p. 718.
- Age of Trees, Pop. Sci. Mo. 52, 717.
- Wislizenius, Dr. A, Hilgard, T.C., Pop. Sci. Mo., Mar. 1898.

Berkeley

- Plantago major, its therapeutic qualities, inter. art., Cal. Med. Jour. vol. 28, p. 203
- Xanthium. Tar from Cockleburs. vol. 28, p. 183, Cal. Med. Jour.
- "White Clover" in Sonoma = Trifolium fucatum (Miss Griffiths Boty)
- Dendromecon rigidum Benth. Teratology. Mill Valley, Tamalpais, June 9, 1907. See Brandegee spms. in Herb. U.C.

Stanford University

Mar. 23, '08

- Meeting of the State Board of Forestry to hear complaints regarding the cutting of timber in the California Redwood Park. Warren Porter, Acting Governor, presiding, Curry, Sec. State, Lull, present. Also Gov's secretary. San Jose people, mainly of the Sempervirens Club present in force and red hot all the way through. Most conspicuous fire-eater was A.P. Hill, San Jose photographer. Crimination & recriminations, charges and counter charges flew thick & fast. The ladies heartily applauded the emotional Hill. George Wharton James was there but didn't speak in meeting.

Stanford Univ.

Mrs. Lovell White rose to ask who the "young man represented" who started in to grill A.P. Hill. The Chair said: The Governor's secretary. Hill had made the wildest statements and the secy started in to pin him down and make him squirm. Dudley saved the day for the Sempervirens Club by his temperate presentation of the protestants' side of the case: No Redwood should be cut said Dudley. Redwoods recover after fire and are more picturesque than before. Dudley worked for the park tremendously and feels very strongly about

March. 23, 1908

cutting any Redwood at all. He rightly emphasized the contention that the park was a park for the preservation of the forest in its wild state. He properly criticized the Washington Forest Service letter from Pinchot's office that "no principle of forestry" had been violated by Lull. It isn't a forestry problem, it's a park problem. Curry then made the definite promise that no more trees would be cut. I had an opportunity at this stage to soothe the warring factions, got applause from the Sempervirens people and handshakes after I was done

Stanford Univ. Mar. 23, '08.

from members of the Board. Abrams was there but did not speak. Middleton who sold the land & the state spoke. Also several others. Went to dinner with Pierce; he has been working a lot on the effects of smelter fumes on vegetation. He regards it as harmful! [That sounds naive to one who has seen the effects as at Keswick but Osterhout says not harmful! O. is retained by the smelters.] At Keswick he remarked that the Poison Oak was not injured, which Platt had told me about some years ago.

Berkeley, Apr. 2. 1908.

- Freak Quercus Douglasii tree on ranch of E. Meader, Fair Oaks: Acorn cups very much enlarged & "hillocky". Leaves small but normal. - E. B. Babcock brings material to me. Grant Wallace, local naturalist, says four oaks there: White Oak (Quercus Douglasii), Live Oak (Quercus Wislizenii), Black Oak (Quercus Kelloggii), and Swamp Oak (Quercus Lobata).

- Quercus agrifolia and tent caterpillars - clusters can be burned out with a rag saturated with gasoline.

Berkeley, Apr. 2, 1908.

- Solanum umbelliferum - teratology - corolla, deeply cleft so as to be nearly charipetalous, this condition is not regular even in one flower. Material brought from Tamalpais by E. H. Bolster. I have no material preserved.

- Kellogg, A., "Old Tiger and the Wolf", Hesperian, vol. 2, p. 232 (1859). This is a sort of animal story in which the plants are brought in. There are several more if I remember rightly in the first one or two volumes.

- "I have been told by competent judges that I am a perfect model of manly beauty." — E. L. Greene acc. Mrs. K. Brandegee.

Telegraph Cañon to West Branch San Pablo Creek, Apr. 4, 1908 (Bot. 4 trip).

- Vicia gigantea. Corolla becoming sordid after anthesis, the calyx still bright red. How is this cross-pollinated? Or is it self-pollinated?

No. 3000. Phacelia distans Bth. Telegraph Cañon at Old Rock Quarry, on shale. Notice narrow but distinct disk under base corolla tube!

- Brodiaea capitata. Bot. 4 class guys following folk names:
"Nigger-toes", Visalia, (Rice).
"Nigger-babies", Berkeley (Miss McDermott).
"Sugar Lump", Sonoma (Miss Griffiths).
"Indian Lily", Berkeley (Miss Hibbard).
"Wild Onion", Newbury Park (Russell).

-over-

Berkeley Hills

Telegraph Cañon to

cont.

- Dodecatheon = Birdie-bells, Nevada state, Miss Hibbard
- Lupinus = Blue-bells, Nevada, Miss McDermott (Laura) ("The only blue flower we have" = The only one that could be called Blue-bells!).

No. 3001. Salix lasiolepis Native pedunculed fruiting catkins. Var. Bigelovii? Telegraph Cañon

No. 3002. Lupinus albifrons Bth. Telegraph Cañon. Det. also C.P. Smith.

No. 3003. Ceanothus sorediatus H.A. West Branch San Pablo Creek Color-patches on N-E. slopes.

West Branch, San Pablo Creek.

Apr. 4, 1908.

No. 3004. Zygadenus fremontii Nats. Brush N.E. slopes, West-Branch San Pablo Creek.

No. 3005. Acer macrophyllum Pursh. Axis of old raceme still persistent on leafy stem (terminal), one also persistent laterally, but the opp. bud flowering this year! having been dormant last year. West Branch San Pablo.

- Quercus agrifolia, bottom of cañon, N. bank of West-Branch San Pablo Creek is a strip of Live Oak which today shows more colors

West Branch San Pablo Creek

due to difference of development than any grove I have seen elsewhere, or any other species of oak. The shades were so marked and set against each other so sharply: dark green, light green (new leaf growth), gray (old frosted leaf growth), light yellow (flowers), pink (tinted young leaves), lavender (tinted young leaves). All in the full sunshine it was very beautiful.

— Calandrinia menziesii. Lot of it among cultivated Monterey Pine on summit-hills. One patch had

↑ Berkeley

April 4, 1908.

about 25 clear albinos in a place 15 ft. sq.!

Miss McDermott ↑Laura has received definite and also confirmatory information that this species is called "Kisses" at Vacaville.

Castilleia she says is called Indian Pink in Nevada, the yellow are called "Bread + Butter". They also have a flower called "Soda Crackers"

— The inheritance, traditions and sentiment of the English-speaking peoples demand certain flower-names for daily usage as part of

Berkeley, 1908

their mental satisfaction and spiritual pabulum. These names appeal to the imaginations of the people, as:

Blue Bells [of Scotland] applied to Lupine! in Ver.

Holly applied to Christmas Berry.

For-get-me-not - applied to Allocarya & Cryptanthe.

Cowslip, applied to Oenothera ovata, etc.

Johnny-Jump-up - applied to Dodecatheon, Viola, etc.

- J.W. Congdon, author of a school flora (illus). for the northern U.S.? or new England. See copy in Library of Herbarium. Pub. 1856. He must have been older by far than he looked when visiting Berkeley a few years ago.

Napa Co.

St. Helena. May 23, 1908.

No 3006. Clarkia concinna greene. Inside lower 1/2 sepals colored similarly to petal bases (red & white) - upper half sepals inside dark red (maroon red?). Hills e. of St. Helena.

No. 3007. Sanguisorba minor Scop. Sunkler says he first noticed this in his hill pasture east of St. Helena (Hyde place) 7 years ago. Pasture very dry & barren of green in summer and no herbage. Cows cropped this plant, calling his attention to it. He paid especial attention to it because he had never seen its like before in the hills and it was new to him. He thinks

St. Helena. May 23.

it may have been brought in by wild pigeons. He noticed the pigeons in a Blue oak tree out of season a good many times and the plant was found at this spot. It is the Salad- or Garden-Burnet of cultivation.

No. 3008. Umbellifer.
Mrs. D.C. Hunt's yard.

- Mrs. Hunt says:
Anagallis arvensis at Valley so all blue-flowered.

Berkeley, June 8, 1908.

- E.P. Sheldon of Portland, Ore. came in today. On a vacation (from the lumber business) which he is to spend botanizing in Lassen and Modoc. He says:
Pinus ponderosa has a var. in the Willamette Valley, which is long limbed to ground and in consequence does not make good logs but is all sapwood! (He calls it var. Benthamiana)
Pinus Coulteri, he insists this is at or near Merlin, s. Oregon and is not Pinus Sobiniana.
M.W. Gorman was a book-keeper for years in Portland. Kept books for the Lumber Manuf. Assoc. etc. For a

Berkeley.

short time did work for Gannett in Washington (Dept of Interior). He is now in charge of the Forestry Bldg. (State or city, Lewis & Clark Exposition Bldg.) at Portland. Is an old man (70 years).

– Cercocarpus parvifolius = "Sweet Brush" say Lillis (West side of the San Joaquin at Rancho Cantua; "Hard Tack" on opposite side, in the Kawzah district. – Sept. '08

Ukiah, June 14, 1908.

– Colonel La Motte says: On the way to the Fish Hatchery Trillium ovatum grows in masses. I have seen rods of it, white like a snow bank. It turns purplish or reddish in age.

The Terraces

about 2600 ft. alt. Purdy Ridge
(Headwaters South Mill Creek).

Carl Purdy says: Sonchus asper and Malacothrix [obtusa] dearly loved by my cow. Leave alfalfa for it. [But his Malacothrix is ~~Sonchus~~ Lactuca Scariola!]

- Cerasus demissa, seldom fruits! Abundance of bloom!
- Fritillarias all of ours nice-root bulbs except F. pluriflora.
- Brodiaea capitata, its offset on a little stalk.

June 15, 1908

No. 3009. Gilia capitata ssp. capitata, On burn

No. 3010. Silene Californica. .. ..

Dry gravelly soil, in swale, flowers very handsome and showy, Plant more compact and bears thicker and smaller than woodland plant.

No. 3011. Stachys bullata rigida ssp. quercetorum Berth. On dry gravelly hillside in burn. very common. Leaves bullate-rugose strongly!

No. 3012. Peucedanum dasycarpum T. & G. var. medium Jepson. Stems (peduncles) covered with small black flies. Dry gravelly hillside burn

No. 3013. Streptanthus glandulosus Hook. with preceding.

Purdy Ridge*

about 2800 ft. alt. (head of South Mill Creek). Mendocino Co.

✓No. 3014. Collinsia. Dry gravelly hillside burn. C. bicolor Benth.

No. ✓3015. Hypericum. with preced. H. concinnum Benth.

✓No. 3016. Hosackia brachycarpa Gth. with preced, but in gravelly swale.

No. 3017. Helianthella. with 3014. (Discarded, insect damaged)

✓No. ✓3018. Gilia mellita Greene. with 3014. = Navarretia mellita Greene.

✓No. 3019. Sanicula menziesii H.A. With 3014.

No. ✓3020. Thelypodium lasiophyllum. With 3014.

No. 3021. Malacothrix floccifera with 3014.

* Just above Purdy's Terraces →

June 15, 1908

No. 3022. Aquilegia formosa var. truncata. Gravelly swale.

Purdy Ridge

No. 3023. Quercus Breweri! But. Nothing but scrub Quercus Garryana. Purdy Ridge.

No. 3024. Aplyllon tuberosum Gray. Chaparral. Red mt.

No. 3025. Wyethia angustifolia DC. Peduncles prostrate Nutt. Sandy-gravelly swale, Red mt.

No. 3026. Cupressus macnabiana. Red Mt., gulch east side.

This is on headwaters South Mill Creek.

Red Mountain

about 3000 ft. alt. SE. Mendocino Co.

– Carl Purdy says:

"Fritillaria, if you want a Fritillaria to flower take one that hasn't flowered. They rest a year. The bulbs with a leaf will flower next year; the third year they rest."

[He is now collecting Frit. coccinea on Red Mountain].

The surface is a loose red rock with very little soil. Deer eat the shoots before they flower so that few plants are seen in flower. Deer also eat Lilium rubrescens.

I have collected 2000 Lilium pardalinum bulbs

June 17, 1908

on the wet swamps south of Ten Mile Road and 15,000 on Red Mountain."

v No. 3027. Cupressus Sargentii Jepson. See next page but one (p. (61). Sheets "A" & "A" from one shrub. Latus formosissimus Greene.

v No. 3028. Hosackia gracilis Bth. Lost Valley. Calyx-tube deflexed a little below the horizontal, all the fls. on one peduncle slanting at same angle; keel and wings projected in line with calyx tube; yellow banner turned back over calyx-tube.

Red Mt. S.E. Mendocino Co.
circa 3000 ft. alt.

Chaparral on Red Mountain

- Manzanita, is fire-killed but comes up well from seed when very young. It is thus an adaptation to fire or case of nanism
- Pickeringia montana, is flowering profusely this year Never saw it more abundant. It fruits very sparingly (C.P.) but it sprouts abundantly after ~~firearms~~ fire, and it will sprout from the roots wherever there are exposed by being uncovered as on a cut or trail

June 18, 1908.

- Cupressus Sargentii. The whole of Red Mountain is covered with it. On the east slope and north side there is a great grove of trees. On the summit and west slope is an area of young trees on a fire burned area. These young trees are 5 or 6 years old. It is a thin growth but they make an attempt to form cover by developing very long lower branches. The open spaces furnish hunting ground for the bulb-diggers. The growth is 2 to 5 feet high and there are many individuals which fruit at 1 or 2 feet, showing

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nanism the same as Cupressus Goveniana on the Mendocino coast. The branchlets are terete
- Quercus dumosa bullata, 2 to 4 ft. h.
- Arctostaphylos Manzanita 1 to 5 ft. h.
- Ceanothus pinetorum but not fruiting or only sparingly. At West Spring fruiting well. = C. jepsonii Greene !!
- The above the only shrubs on Red Mountain which is very destitute of vegetation as to variety.

Red Mt.

S.E. Mendocino Co. Circa 3000 ft alt.

- Fritillaria corcinea - grows in abundance on the rocky chaparral slope. Purdy remarks that its differences with recurva are not great; difference in height (taller), its red instead of orange flowers, and in its bulbs, and also narrower flowers. Its differences due to the special soil conditions. When Greene took it up as a species Purdy wrote and told him what he knew about the differences. Green published the latter whereupon Mrs. Brandegee sent Purdy an envelope merely enclosing a clipping

SE. Mendocino Co.

Red Mt. corca 3000 ft. alt.

of Greene's note, as if to say, Yes favor Greene! then it is all over between us! And she lived up to it! F. coccinea has a bulb of few thick scales. It is higher than thick. F. recurva has a bulb large round and flattish with a peak in center and rice-grain bulblets thick around margin. Very different.

– Mimulus glutinosus, the var. of the southern Sierras has been seen by Purdy on Tule River, the form with handsome pale yellow flowers, which I collected on Kaweah. Purdy says it is as handsome as the yellow Azalea! He is to cultivate it.

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Wet & Dry Land Forms

– Brodiaea lactea has a dry land and a swamp land form in California. The swamp land form has offsets, the dry land not. One, the wet land, goes north to British Columbia, the other does not. (One form named by Greene

– Brodiaea laxa, blue form in dry land, white form in swamps. Greene mistook this for B. peduncularis which has pedicels longer than the scape & yellow (not blue) ovary.

Sx. Mendocino Co.

Red Mt. circa 3000 ft. alt.

- Calycanthus occidentalis - abundant in little swamp, west side spring.

No. 3029.

- Streptanthus

On gravel slide, west side Red Mt. Petals bilabiately arranged, two upper white, two lower white with purple blotch in center.

- Cupressus Sargentii. Jepson

All over west side of mountain, mainly small trees but an occasional

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larger tree where not burned. Area of unburned large trees on south side. One tree, average of larger size measured 8 inches diameter at one foot and about 15 feet high. Bark dark brown, roughly broken into narrow ribbons ½ inch wide which run mainly to right spirally up tree but also intertwine somewhat making a cross hatch.

Hundreds of acres of it, on burn, young trees standing close and very even, about 4 ft. high; first cones often within 1 ft of ground.

Red Mt. circa 3000 ft. alt.

Sometimes in these young areas will be small compact islands of old trees (10 to 14 ft. h.) Where I stand now on S. side of mountain areas of both young and old nearly pure - a small admixture of manzanita Old trees usually become flat-headed at about 11 or 12 feet.

On east side of mountain the largest trees are 18 feet high and 8 or 10 inches diameter at 1 ft. I measure one tree about 18 ft. h. and 4 ft 3 in. circ. at 1 ft.

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Often very heavy with cones in top. I note a tree its crown so densely filled with cones that one cannot see through it - half as big as a bushel.

Red Mt. circa 3000 ft. alt.

– Lilium pardalinum – Four Mile Glades, 8000 salable bulbs from an area of 25' x 35' feet. This lily has a terminal bud to its rootstock or 3 terminal buds. This branching results in extensive multiplying of the plants as the rootstocks die off behind eventually. Lilium (parvum ?) has never more than one terminal bud.

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No. 3030. Zygadenus micrathus Eastw.
Lost Valley, swale.
Purdy says Miss Eastwood has, or is going, to publish this as new. The Pomos used Zygadenus as a death poison.

No. 3031. ~~Godetia~~ Clarkia
Lost Valley, swale.

No. 3032. Polygala californica Nutt.
Lost Valley. swale.

No. 3033. Cupressus Sargentii n. sp.
Dwarf.
Dwarfs were especially noticeable in the recently burned areas.

Red Mt. ca. 3000 ft. alt.

No. 3034. Ceanothus integerrimus var. californicus (Kell.) Benson Lost Valley. H. & A.

Purdy says it is white, pink, pale blue.

No. 3035. Camassia Leichtlinii Wats. Perianth twists above ovary in a straight line. In Camassia esculenta turns backward.

No. 3036. Habenaria dilatata var. leucostachys Wats. Lost Valley, in swamp.

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Major and Minor forms:- Purdy says there are major and minor forms of Lilium pardalinum, as also of other lilies. Mainly differences in size but sometimes correlated with other differences - especially bulb differences. He says all* species of the Liliaceae can be distinguished by the bulb alone - that the men in his garden soon learn to distinguish the bulbs at a glance.

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* His statement may not have been so general but it was comprehensive.

Red Mt. ca. 3000 ft. alt.

- Brodiaea capitata has many forms but they are of no importance especially. It has no wet land form so far as I know - C.P.
- Brodiaea grandiflora, is a variable species but only in the form of the staminodia. Some of these forms have been described: B. minor, terrestris, stellaris, Orcutti, filifolia, etc, etc. I dread the time when someone finds out about these variations and they become greenified - C. P.

June 18, 1908.

No. 3037 Eunanus.
Dry torrent bed. Flo. sometimes beginning at ground. Corolla crimson, purple throat, white band on lower side, middle, purple dotted.

- Carduus venustus, I see a humming bird sucking its flowers.

No. 3037a. Mimulus Layneae (Greene) Jepson det: A. L. G.
~~No. 3037b. Mimulus~~

No. 3038 Mimulus. Mimetanthe pilosa (Benth.) Greene. Det. A. L. G.
Corolla yellow, 2 small but distinct purple dots, at intervals between lobes of lower lip, one at each interval.

Red Mt. ca. 3000 ft. alt.

No. 3039. Torreya Californica
Trees 50 feet high in
Mill Creek Canon. Also
occurs in the scrubby
growth on north slopes
in the range above,
towards the summit of
Purdy Ridge and towards
Eight Mile Valley. The trees
and shrubs are fruiting
heavily this year.

June 18, 1908.

Nanism.

Cases of Nanism observed
as follows on Purdy Ridge
and Red Mt.

- Arctostaphylos Manzanita,
does not stump sprout.
Comes into bearing very
early. From seed-sown plants.
Is a clear adaptation
to fire conditions.
- Torreya Californica, fruits
very early, at about 12 years
old.
- Pinus tuberculata. Fruits
young here as elsewhere.
- Cupressus Sargentii, fruits
at height of one foot.

Red Mt. SE. Mendocino Co. ca. 3000 ft. alt.

Tap Roots.

- Quercus Wislizenii var. fruticosa is shallow rooted. Easily bowled over in road-making. (As easily as Chamaeb? but ask Purdy).
- Quercus californica var. eibata, tap-rooted, and the stools send down tap roots.
- Quercus Garryana var breweri, tap-rooted.
- Quercus chrysolepis, tap-rooted.

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- Juniper. Purdy says there is a Juniper on west side of Scott Valley and in hills further west. Also a Juniper about Epperson's, Lake Co.

Oakland.

-. Dr. Hackett says: About 8 miles above Boulder Creek on "China Grade" I found 3 or 4 miles of Foxglove, great patches of it here and there, pink flowers, white flowers, the latter especially in shade near springs

Pescadero country a great country! Fine country! Great lot of Redwood in there hill, fine timber. Plenty of Douglas Fir mixed with it. Scattered Redwood as far north as Palo Alto. Great show of wild flowers in this coast country near ocean — Asters and Goldenrod in great show in October. (- June, 08)

Berkeley, Aug. 08

-. Trichostemma oblongum. 4 miles east of Toll House, Mt. St. Helena, July 25, 1908., fide W.W. Carruth.

- Bigelow, J.M., for places visited in Sierras see Pac. R. Rep. 4, 21.

- Redwood, bark, used ground for shipping grapes east in cold storage. Works better than cork used in shipments from Spain. U.S.D.A. bulletin on it. Stubenrauch has something to do with it. — Apr. 17, 1909.

Berkeley

– Miss McDermott, Grad. Student says: We have no special flora in Nevada, none at all. We use at the State Univ. any books we can get. I used Jepson's Flora of middle California a good deal. One day I said to Professor Kennedy: Is the author of this book still alive? Prof. Kennedy thought a moment, looked at the date on the title page and said: "Oh, I guess so. He is probably one of those old sages at Berkeley with a long white beard!" Later, he

August, 1908

came down to Berkeley and I took you to see him. After the introduction, he said, when you had gone, Why on earth didn't you tell me he was a young fellow. I think we better go back to Nevada and get out a flora if a young fellow as he is can get out a book like that!"

As one is always without honor in his own country this story was not unpleasant to hear.

Berkeley.

-Redwood statistics;
Cal. State Agr. Soc. 1874. p. 402
600,000 feet to acre, Van Duzen Creek
800,000 " " " Salmon "
600,000 " " " Elk River
900,000 " " " Mad Rivr
1000,000 " " " Little Rivr
Humboldt Co. had 10 saw-mills in 1872

"Humboldt County may be strictly called an agricultural county" — Rep. Surveyor General Calif. 1862, p. 113.
"We have in our county a large amount of Redwood timber lands xxx the most of it-

1908

reported not worth surveying by the United States Surveyor, l. c. p. 118.
- Rate of growth of Redwood - see p. 403, Cal. Board. Hort. Rep. 1891. Also p. 326-8.

- Pickets and shakes at Ukiah, cost. cf. Rural Press, June 3, 1882, p. 430, vol. 23.

- Kellogg, A. Forest Trees of Cal. reprinted in Rural Press abmt 1882.

- Bridges. cf. Abies Bridgesii, A. Kellogg, Proc. Cal. Acad. vol. 2, p. 8 (1863).

Berkeley

– Forests of Pacific Coast

Asa Gray, Atlantic & Pacific Forests, Pac. Rur. Press, vol. 16, p. 115, 131, 147, 163, 211, 227, 242.

Sargent, Pac. Coast Lumber Preservation, Pac. Rur. Press, vol. 17, p. 171.

Forests of the Pac. Coast; l.c. vol. 24, p. 244

Kellogg, W.G. Good offices of a Botanic Garden, Pac. Rur. Press, Vol. 18, p. 386.

Sander, W.A., Dusy's Grove of Big Trees. l.c. vol. 18, p. 162

Parry, C.C. A Botanical Establishment in

1908

Cont.–

Southern California, vol. 21, p. 402

Kinney, Abbott, Forests of Florida, l.c. p. 155, vol. 21.

Timber in the Truckee, vol. 22, p. 210.

Forest Trees of Calaveras vol. 5, p. 44.

– Judge Platt says: Used Acer circinatum wood at Montesano, Wash., in 1888 for wooden spoons. Wood fine-grained and fairly soft.

– Hickman, J.B., Hort. Com. Santa Cruz Co., Arcadia, Cal. Lectured Apr. 23, 1909 at Univ. Cal. on "Our Future Crop of Economic Entomologists".

Berkeley

- Pinus flexilis, one trunk always! cone-scales thickened but hollowed on upper side! Pinus albicaulis, several trunks (3-5) from base, cone-scales not only thick but also thickened on upper side very noticeably." — Hopkins

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- Cupressus Arizonica. Seeds sent by Ludwarth & germinated in U.C. Bot. Gard. Cots up to 5! — Mar. 1909.

1908.

- Coulter Pine in Pine Valley, San Diego Co! Cones seen by Parks. Not the Digger Pine as said in Bot. Mex. Bound.
- Jeffrey Pine, cones 8 in. max. long acc Parks, Bot. of Sargent gives 12 as as maximum! Too much

- Rainfall & forests. Map of California. Mo. Weather Rev., Jan, 1908. Hubbard.
- Rainfall, temp., trees; see Bull. Am. Geog. Soc. July, 1906, Gannett.

Berkeley, Sept, 1908.

- Brodiaea stellaris, mentioned as being in the San Gabriel Valley near Los Angeles by L.A. botanists says Carl Purdy. He questions it.

- Greene, E.L. "Identification of grasses and plants – Dr. Edward L. Greene, Consulting Expert, Washington, D.C."
Taken from Field Program for Sept. 1908, U.S. Forest Service under "Forage Investigations"

- Tidestrom, Ivar, Scientific Assistant, Ephriam, Utah. Poisonous plant investigations U.S. Forest Service. Cf. Field Program, l.c.

1908.

- Seeds, Longevity, Bot. Gaz. 1908, Apr., p. 276.
- Soils, Properties of Unproductive Soils, U.S.D.A., Bur. Soils, #36, #40, #50 (Bulletins); also Bull. Torr. Club, 34, p. 279.

- Heller, A.A. "Is a master printer. Trained in the printing shops of Lancaster, Pa. He has four acres in his place at Los Gatas. How did he make a living? By working his place, & a neighboring print-place, by Muhlenbergia and by his catalogue. He does all the work on Muhlenbergia, setting type after his days work. He has very radical views. Has good health and can work hard. He has a wife and two children and his wife's mother to take care of. – Robert D. Pendleton, Saratoga, who visited me Nov. 17, 1909. (A High School Boy).

Curiosities of Bot. Lit.

"This form [Quercus Emoryi] which connects the white-oaks with the black-oaks, is of the greatest interest to the student but annoying enough to the systematic botanist"
– Trans. Acad. St. Louis, vol. 3, p 394 (1877); the paper on the oaks by Geo. Engelmann; see also his Coll. Works, p. 401.

– Cupressus goveniana dwarfs sent from Carmel, hills eastern of Allens Ranch, 1908, by Miss Elizabeth Reed. About 8 inches high, the crowns rounded with perfect branching main arms to trunk like an oak!! No cones!

Berkeley, 1908

Subjects for Students

– Leaf Development. Cf. Lewis Am. Nat. 41, pp. 353, 431.
– Why are there no seedlings of Alder in the cañon?
– Seedlings of Umbellularia.

– Brandegee, Mrs. K. – talks too much, criticizes too freely. R.L. Pendleton in just now. Mrs. B. told him Heller was no worthy botanist – or words to that effect – and spoke her criticism of him very freely and adversely Now think of thus taking the whole world into her confidence on personal matters and speaking so to a stranger at first meeting and a High School boy at that! I told the boy we needed here in California (without referring to Mrs. B.) to spend all our energies studying the native plants – Apr. 18, 1909.

Berkeley

-Teratology- Solanum umbelliferum Esch, 1 flower from Strawberry Canion, detected in Bot. 3. material on Nov. 12, 1908 —

Stamens 8 = very distinct!
Pistils 2, = style distinct and ovaries partly or wholly distinct!
Corolla lobes = 7.
Calyx lobes = 9 or perhaps better = 7 with 2 lobes 2-toothed.
Material dried, in herb.

- Evernia vulpina - the deep yellow lichen of Sierra pine trees.

1908.

- Red Oak, in Mendocino = Castanopsis chrysophylla! Cf. v. 10, p. 21, 24 supra. In Humboldt County = Quercus chrysolepis! Cf. v. 8, p. 191, 184.

- Quercus Garryana. Its huge limbs fall from dry rot so that the Indians would not live under these trees. Saunders, student, Bot. 4, says a man driving a wagon on the Ukiah - Round Valley Road was killed by a limb falling on him.

Berkeley, 1908

- Burr Oak, cf. vol. 10, p. 161.

- Bridges. Cf. Abies Bridgesii, Kellogg, Proc. Cal. Acad. ii, 8
- Newberry, J.S., l.c.
- Beardsley, A.F., vol. 1, p. 91, mentioned on p. 91, vol. 1, Proc. Cal. Acad. Sci.

Cont. from p. opposite ↗

- No rain yet but several misty threatening days - Oct. 14, 1908.
- Rain! fair fall of water. Oct. 15. 1908.
- First storm about Nov. 23.

Seasonal Notes. - 1908

April 4. — No rain for six weeks. Oaks now in full flower. Conditions for pollination most favorable. Nature of acorn crop in fall to be noted.

— Heavy acorn crop! and the acorns very large.

Remarkably large acorns of Valley Oak brought in from St. Helena by Miss Friedlander ex Bot. 4.

Saunders from Mendocino says the crop is to be early! Squirrels already in the trees!

There has been no rain since above mention save mere traces or light showers and these few, having no effect on vegetation - W.L. Jepson. Sept. 11, '08

Miscellaneous Addresses.

- W.V. Eberly, Mgr Cal. Nursery Co. Niles
- Stevens, outside man, " " " "
- Clark, office " , " " " "

Monterey Addresses.

- Dr. E. K. Abbott, Monterey
- Frank D. Hatton, ranchman, Monterey
- D.M. Allen, owner Pt. Lobos ranch.
- S.M. Trotter, Sun Coast.
- Merritt, Principal of Monterey High School.
- Judge E. P. Unagast, Superior Judge, San Luis Obispo.
- Frank D. Hatton, Monterey P.O. Ranch on Carmel River.

Mendocino Co. Addresses.

- P. E. Carey, 70 Liberty st., S.F.
- Captain and Mrs. Selfridge, Willits
- Mr. & Mrs. Wm. Foster, North-western.
- Mr. and Mrs. Johnson, Union Lumber Co., Ft. Bragg.
- Miss Emily Johnson, Ft. Bragg.
- Miss Van Arsdale, Ridgewood
- Mr. White, Ass't. to Mr. Johnson, Ft. Bragg.
- Dave Sawyer, expert on Tan Oak, Willits.
- E. F. Burke, care Union Natl Bank, Oakland
- August Heyn, Willits
- Jim Patrass Santa Rosa
- Mrs. Theo. A. Payne,
- Frank D. Hatton, Monterey, P.O.

Eucalypts.

Oregon

- Dr. W. Hayden, probably Marshfield, Oregon
- W. D. Ward, Brookings Lumber & Box Company, Goldbeach, Oregon.

Sunkler
Overacker

6 ft 5½ in
11.6.5

Roll no 6.

1. Redwood, Sherwood Home, 170 ft. high. Fasciated group: 9:00 oclock, bright. 16 stop. 1/5 sec.
2. Typical Tan Oak hill top. Sherwood. Home. Tan Oak + Douglas Fir chiefly. A little Madrone. 16 stop. 1/5 sec
3. Lovely buds base Tan Oak stump Tree #22. 16 stop. 1/5 sec 10 oclock bright. (6 feet focus).
4. Same 10 ft focus 8 stop 1/25 sec
5. Loading bark on car. Stop 8, 1/25 sec.

Roll no. 5.

1. Unloading bark from sled. 8 stop. 2 sec. Shade. bright day.
2. End fire burned goose-pen log, 1/5 sec. 16 stop
3. Linear fire scar, 2 sec. 32 stop } 20 inch
4 " " " 1/5 " 16 " } Tan Oak
5. Bark on tree drag. 2 sec. 16 stop } shade
6 " " " " " " " " } bright day